



**2003**

**Summer**

# **MOVE your career FORWARD**



- ▶ **The degrees that you need**
- ▶ **The certificates that you want**
- ▶ **The cutting-edge courses that employers require**

CLASSES BEGIN MAY 19, 2003

UNDERGRADUATE & GRADUATE COURSES

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**See our accelerated summer schedule inside.**

**SUMMER SESSION I – MAY 19-JUNE 27, 2003**

**SUMMER SESSION II – JULY 7-AUGUST 15, 2003**

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Continuing Studies, Corporate and Distance Education  
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UMass Lowell

# MOVE your career FORWARD



CONTINUING STUDIES' EXECUTIVE TEAM:  
Bottom Row: Pauline Carroll, Johanna Bohan-Riley,  
Catherine Kendrick; Top Row: Jane Worthley, Amy Yacus,  
Jacqueline F. Moloney, and Steven Tello

## Dear Students and Prospective Business Partners:

This summer, move your career forward quickly. Choose between 6-week intensive classes or 14-week courses.

Too busy to come to class? Take a course online. UMass Lowell's undergraduate and graduate programs can accelerate your progress.

Need help with deciding what to take? Get speedy advice from our friendly counselors. Explore your fastest options for earning college credit, professional certificates, or specialized degrees.

This summer, you can become more competitive and better qualified for advancing your career. UMass Lowell can help you pursue your future with speed and confidence.

P.S. Check out our new Corporate Signature Seminar Series. See page 7.

Regards,

Jacqueline Moloney, Dean

## Continuing Education Open House

Please join us for the Continuing Studies and Corporate Education Summer Sessions

Open House and General Registration on Tuesday, May 13, 2003, from 5:00 to 7:30 p.m. in Southwick Hall 223.



## EARLY BIRD ADVISING

April 14 through May 9, 2003

"The advisors I spoke with from your Advising Center were friendly, conscientious, and they helped me to map out a customized education plan. They took into consideration my current areas of interest and employment, and came up with a creative mix of courses that I could take to finish my bachelor's degree. Once I had met with my advisors, I felt motivated to complete my degree with renewed enthusiasm."

— Wendy Sullivan, Degree Candidate

Call the Advising Center at (978) 934-2474 to set up an appointment with an Academic Advisor to review your program worksheets and plan for the upcoming semester.

Remember, Summer Sessions begin May 19, 2003. For a complete list of courses, visit <http://continuinged.uml.edu> or contact us at (978) 934-2474 for more information.

Tuesday, May 13, 2003, 6:00-6:30 pm & 7:00-7:30 pm

## New Student Orientation

Are you a new student to Continuing Studies and Corporate Education? Do you have questions about registration, tuition, applying to a degree or certificate program, etc.?

Then join us for our New Student Orientation Night!

Find out how easy it is to get answers to questions such as:

- How do I select a course and check for prerequisites?
- How do I register?
- Am I able to enroll in a degree or certificate program?
- When do I pay for my courses?
- Where is my classroom located?
- How do I take a course online?
- How do I use the electronic library?

Call the Advising Center today at (978) 934-2474 to reserve your seat!

## OPEN HOUSE & GENERAL REGISTRATION

**Tuesday, May 13, 2003**

5:00-7:30 pm  
Southwick Hall, North Campus

Find out about:

- Evening Certificate Programs & Degrees
- Financial Aid • Online Courses

Academic Advisors will be available at UMass Lowell North Campus.\* For further information, call (978) 934-2480.

\*Please note: Transfer credits will not be evaluated during the Open House. Students should plan on making individual appointments with an Academic Advisor prior to the Open House.

## Free Online Orientation!

Come see how **easy** it is to take a course **online**!

Want to learn more about taking courses over the Internet? Are you planning on registering for an online course this semester? This orientation will introduce you to the features of your online course and answer any questions you may have.

Join us at the session that best fits your schedule:

### Session 1:

Tuesday, May 13, 5:30-6:15 pm

### Session 2:

Tuesday, May 13, 6:30-7:15 pm

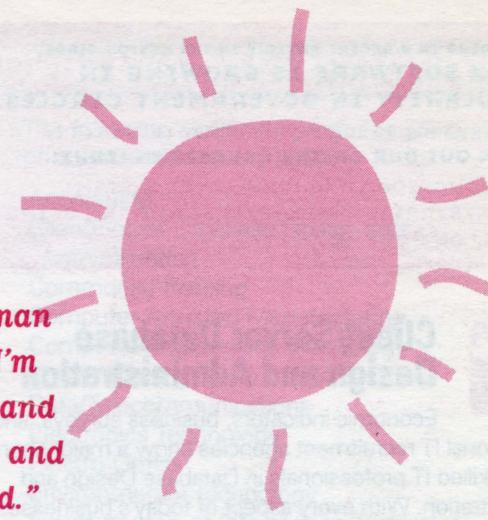
Call (978) 934-2474

to reserve your seat in one of these sessions!

# Certificate Programs

Take advantage of your company's tuition reimbursement policy to move your career forward!

*"I kept putting off going back to school until an employee representative in our Human Resources department explained our company's tuition reimbursement program. I'm now in my third semester, more than half way towards my multimedia certificate and my company has paid for the whole thing. I've already brought a lot of great ideas and techniques back to my unit so the whole company is benefiting from what I learned."*



## Creative Arts/Media APPLICATIONS



### Website Design & Development

In our rapidly-evolving, knowledge-based economy, workers are struggling to keep up with the latest technologies and skills. Specifically, in the area of internet technology, local companies are actively pursuing employees with knowledge and skills in website design and development. Note: Students participating in this program should have basic Mac OS and/or Windows familiarity.

#### Required Courses:

- 90.231 Graphics for Multimedia and the World Wide Web
- 90.238 Website Development
- 90.291 Introduction to DHTML
- 70.379 Website Design
- 70.384 Advanced Website Design and Development

#### Electives (Choose 2):

- 70.262 Digital Imaging and Photography
- 70.385 Streaming Media for the Web
- 78.201 Introduction to Audio for Multimedia and the WWW
- 90.230 Introduction to Multimedia
- 90.236 Instructional Design for Interactive Media
- 90.245 Website Server Administration
- 90.246 Active Server Pages
- 90.247 Advanced Web Authoring: Flash™
- 90.248 Website Database Implementation
- 90.249 Developing IT Training for the Web
- 90.250 E-Commerce on the Web
- 90.292 Advanced DHTML
- 90.301 Java Programming
- 90.302 JavaScript
- 90.305 Introduction to Perl
- 90.306 Introduction to XML



### Graphic Design & Digital Imaging

This certificate program offers students interested in breaking into graphic design and electronic publishing an innovative mix of traditional design courses along with several courses in the latest publishing technologies. From traditional graphic design to designing for multimedia and the World Wide Web, students in the program complete numerous portfolio pieces geared towards the professional market.

#### Required Courses:

- 70.240 Fundamentals of Typography
- 70.245 Desktop Publishing: Layout and Production
- 70.262 Digital Imaging and Photography
- 70.291 Introduction to Graphic Design
- 70.391 Advanced Graphic Design
- 70.400 Portfolio Production Seminar

#### Electives (Choose 3):

- 70.264 Computer Graphics & Illustration
- 70.362 Advanced Digital Imaging
- 70.376 3D Computer Animation
- 70.377 Advanced Animation: After Effects®
- 70.379 Website Design
- 70.384 Advanced Website Design & Development
- 70.392 Design for Advertising
- 90.230 Introduction to Multimedia
- 90.231 Graphics for Multimedia and the World Wide Web
- 90.233 Multimedia Authoring Software: Macromedia Director®
- 90.238 Website Development

NEW!

### ATTENTION MULTIMEDIA & WEB STUDENTS!

#### Audio for Multimedia and the World Wide Web 78.201-021

Held in one of UML's state-of-the-art Windows labs and features Sonic Foundry's Sound Forge® 6.0 software.

This new course can be counted as an elective towards the Certificate Program in Multimedia Applications and the Certificate Program in Website Design & Development. This course provides participants with the technical background in audio they will need for effective Multimedia and Web-based use of sound.

Instructor: Alex Case  
When Held: Summer Session II:  
July 7 - August 15, 2003  
Tues/Thurs Evenings from 7-10 pm  
Prerequisites: Intro. to Multimedia or HTML is recommended.  
Tuition: \$660

To Register, call the Office of Enrollment Services at (978) 934-2700.

## Information TECHNOLOGY

ACCORDING TO A RECENT ARTICLE IN THE BOSTON GLOBE, THE ROLE OF ADMINISTRATIVE PROFESSIONALS IS CHANGING REQUIRING A HIGHER LEVEL OF SKILLS.

(SOURCE: BOSTON GLOBE, APRIL 4, 2002)

#### CHECK OUT OUR COURSES IN:

- INTRODUCTION TO PERSONAL COMPUTERS AND MICROSOFT OFFICE (90.202)
- APPLICATIONS SOFTWARE: ACCESS (90.171)
- RELATIONAL DATABASE CONCEPTS (90.474)
- EXPLORING THE INTERNET" (91.113)

(SEE PAGES 9-11)



### Fundamentals of Information Technology

Available On-campus or Online.

The need for professionals with a strong information technology background will continue to increase as business, government, schools, and other organizations seek new applications for computers and networks in the workplace. This certificate is designed as an introductory program for those who want to explore a broad range of electives in different subject areas before deciding on an area of specialization. This program can be used as a gateway to the other, more specialized certificate programs.

You can earn the Certificate in Fundamentals of Information Technology entirely online, on campus, or by taking a combination of online and on campus courses. For more details, please see our Continuing Education website at <http://continuinged.uml.edu>.

#### Required Courses:

- 90.160 Introduction to Information Systems
- 90.202 Introduction to Personal Computing and Microsoft Office\*

#### Electives (Choose 4):

##### Programming Electives:

- 90.211 Introduction to Programming with C, Part I
- 90.212 Introduction to Programming with C, Part II
- 90.220 Visual Basic
- 90.267 C Programming
- 90.268 C++ Programming
- 90.269 Advanced C++
- 90.270 Visual C++
- 90.364 Problem Solving with C

##### Database Electives:

- 90.171 Applications Software: Access
- 90.342 Web-Enabled Database Development
- 90.474 Relational Database Concepts

##### Multimedia/Web Electives:

- 90.230 Introduction to Multimedia
- 91.113 Exploring the Internet

##### Additional Electives:

- 90.311 Introduction to the UNIX Operating System
- 90.312 UNIX Shell Programming
- 90.461 LAN/WAN Technologies

\*Students with spreadsheet and database experience on Macs or PCs can replace 90.202 with any of the elective courses listed above.

\*\*Note: This is a partial list of computer elective courses. For the complete list of courses that may be applied as electives, see the Continuing Education Course Catalog for computer courses with the 90. or 92. prefix.

ACCORDING TO A RECENT ARTICLE IN THE BOSTON GLOBE,  
LINUX SOFTWARE IS GROWING IN  
POPULARITY IN GOVERNMENT CIRCLES.  
(SOURCE: BOSTON GLOBE, MAY 30, 2002)  
CHECK OUT OUR ONLINE COURSES IN LINUX:  
INTRODUCTION TO LINUX & LINUX SYSTEM  
ADMINISTRATION AND SHELL SCRIPTING USING  
LINUX, ON PAGE 10.



## Client/Server Database Design and Administration

Economic indicators, business surveys, and professional IT recruitment agencies show a major shortage of skilled IT professionals in Database Design and Administration. With every aspect of today's businesses being moved to E-Commerce to service the vast global economy, professionals skilled in database technology are in critical demand. This certificate is designed to provide a strong background in all areas of database and data-related skills: operating system platforms, database design, development, and administration. Utilizing state-of-the-art labs, hands-on skill building and projects are emphasized.

### Required Courses:

Note: Students with experience equivalent to any of the required courses may substitute up to two electives for the required courses, with prior approval of the program coordinator.

- 90.443 Introduction to Client/Server Computing
- 90.450 Oracle Architecture and Administration
- 90.454 Oracle Structured Query Language (SQL)
- 90.474 Relational Database Concepts

### Electives (Choose 2):

- 90.220 Visual Basic
- 90.311 Introduction to the UNIX Operating System
- 90.319 Introduction to Linux
- 90.445 SQL Database Servers
- 90.453 Advanced Oracle Administration
- 90.455 Oracle Projects
- 90.459 Oracle Procedural Language Development
- 90.479 Advanced Database Applications: PowerBuilder



## UNIX®

Available On-campus or Online.

The Certificate in UNIX is designed for those currently in the computer industry who want to upgrade their skills, and for those with basic computer literacy who want to enter this fast-growing field. Students learn skills that are immediately applicable in the workplace as well as C Programming, the language in which most networking software is written. Many of the courses in the UNIX certificate program may be used to satisfy requirements in the Fundamentals of Information Technology and Data/Telecommunications Certificate Programs, as well as the A.S. or B.S. degrees in Information Systems.

You can now earn the Certificate in UNIX online! See the Continuing Education website at <http://continuing.uml.edu/online> for more information.

### Required Courses:

- 90.267 C Programming
- 90.311 Introduction to the UNIX Operating System
- 90.312 UNIX Shell Programming
- 90.360 Introduction to Data Structures

### Electives (Choose 2):

- 90.268 C++ Programming
- 90.269 Advanced C++
- 90.313 UNIX Internals Overview
- 90.316 UNIX System Administration
- 90.318 Advanced UNIX Internals/Tuning
- 90.319 Introduction to Linux
- 90.321 Linux System Administration



## Data/Telecommunications

Networking is a multi-billion dollar industry. The Certificate Program in Data/

Telecommunications trains participants for positions as entry-level network administrators, LAN technicians, and system analysts responsible for networking functions in large or small companies. Many of the courses in this certificate program can be applied towards the A.S. or B.S. degree in Information Systems.

### Required Courses:

- 90.267 C Programming
- 90.311 Introduction to the UNIX Operating System
- 90.461 LAN/WAN Technologies
- 90.462 TCP/IP and Network Architecture
- 90.463 Advanced Networking Technologies

### Electives (Choose 1):

- 90.464 Network Management
- 90.483 Wireless Communications
- 90.484 Fiber Optics on the Enterprise Network



## Intranet Development

Available Online.

The Certificate Program in Intranet Development provides students with an understanding of the range of skills required to develop a successful intranet. Students are required to complete an intranet survey course, a database design course, and an interface design course, as well as core programming courses. In addition, students will select two electives which support an area of focus in intranet development. Students completing the Certificate Program in Intranet Development can qualify for positions as intranet developers, database integration specialists, systems operators, systems administrators, or corporate Webmasters.

Earn the Certificate in Intranet Development online! See the Continuing Education website at <http://continuing.uml.edu/online> for more information.

### Required Courses:

- 90.340 Intro to the Application and Development of Intranets
- 90.341 Intranet Applications for the Organization
- 90.461 LAN/WAN Technologies
- 90.474 Relational Database Concepts

### Electives (Choose 2):

- 90.267 C Programming
- 90.268 C++ Programming
- 90.301 JAVA Programming
- 90.305 Introduction to Perl
- 90.342 Web-Enabled Database Development
- 90.462 TCP/IP and Network Architecture
- 90.490 Intranet Practicum/Internship

## Contemporary Communications

Available On-campus or Online.

The Contemporary Communications Certificate is intended as an introductory certificate to prepare students for work in a rapidly changing, information-driven workplace. Students will develop skills in research, analysis, writing, graphic presentation of material, and the use of technology as a tool for communication. This certificate program is interdisciplinary and draws upon the expertise and knowledge of several departments within the University. Many of the courses in this certificate can also be applied towards several other certificates and degrees offered by UMass Lowell.

### Required Courses:

#### Written Communication (Choose 1):

- 42.221 Writing for Interactive Media
- 42.224 Business Writing
- 42.226 Technical and Scientific Communication

#### Computer-Based Communications (Choose 1):

- 90.202 Intro to PCs and MS Office
- 91.113 Exploring the Internet

#### Strategic Thinking and Effective Communication (Choose 1):

- 45.205 Argumentation and Rhetoric
- 45.207 Corporate Communications
- 62.201 Marketing Principles

#### Multimedia/Graphic Design and Development (Choose 1):

- 70.291 Introduction to Graphic Design
- 90.230 Introduction to Multimedia

### Electives (Choose 2):

- 42.221 Writing for Interactive Media
- 42.224 Business Writing
- 42.226 Technical and Scientific Communication
- 42.300 Journalism
- 45.205 Argumentation and Rhetoric
- 45.207 Corporate Communications
- 45.356 The History, Theory, and Practice of Rhetoric
- 62.201 Marketing Principles
- 70.291 Introduction to Graphic Design
- 90.202 Intro to PCs and MS Office
- 90.230 Introduction to Multimedia
- 90.291 Intro to DHTML
- 91.113 Exploring the Internet

## Engineering TECHNOLOGY



## Computer Engineering Technology

The Certificate Program in Computer Engineering Technology is designed to provide students with a broad-based knowledge of digital electronics, microprocessors and advanced digital technologies. Students enrolled in the program must complete the seven courses listed below. The curriculum includes engineering science and design courses that provide a balanced view of hardware, software, application trade-offs and the basic modeling techniques used in computer engineering. All the courses in this certificate program can be applied towards the B.S. degree in Electronic Engineering Technology.

### Required Courses:

- 17.341 Logic Design I & Laboratory
- 17.342 Logic Design II & Laboratory
- 17.353 Digital Electronics
- 17.383 Microprocessors A
- 17.384 Microprocessors B
- 90.267 C Programming
- 90.268 C++ Programming

## Electronics Technology

The Certificate Program in Electronics Technology is designed to provide the students with a broad-based knowledge of circuit theory and electronics, with laboratory work included to ensure that good hands-on experience is acquired along with the deep understanding of fundamental and changing technologies. All the computer courses in this certificate program can be applied towards the A.S. or B.S. degree in Electronic Engineering Technology.

### Required Courses:

- 17.213 Circuits I
- 17.214 Circuits II and Laboratory
- 17.215 Circuits III and Laboratory
- 17.216 Circuits IV
- 17.341 Logic Design I and Laboratory
- 17.355 Electronics I & Laboratory
- 17.356 Electronics II & Laboratory
- 17.357 Electronics III & Laboratory
- 17.358 Electronics IV & Laboratory

## Computer-Assisted Manufacturing

As the United States focuses on the challenges of global economic competition, one of the key tools for sharpening our competitive edge is the use of the computer as an aid to engineering and manufacturing. The Certificate Program in Computer Assisted Manufacturing is designed to provide engineers, technicians, managers and those working in a manufacturing environment with an introduction to the computer as used to enhance industrial competitiveness. Students will apply various popular software packages and work with personal computers.

### Required Courses:

- 23.200 Computer Aided Drafting (CADr)
- 23.419 Computer Aided Manufacturing
- 23.480 Computer Aided Design (CADes)
- 23.484 Intro Pro-E OR
- 23.485 Intro to SolidWorks

### Electives (Choose 2):

- 23.101 Engineering Graphics
- 23.102 Engineering Design and Graphics
- 23.301 Manufacturing Technology Laboratory
- 23.305 Manufacturing Processes

**"THE ORACLE CLASS I TOOK AT UMASS LOWELL WAS GREAT. I JUST GOT OFFERED A JOB AS A DATABASE/APPLICATION PROGRAMMER AT A SMALL SOFTWARE COMPANY IN SALEM, NH. I AM SURE THAT I WILL BENEFIT FROM WHAT I LEARNED IN CLASS AT MY NEW JOB SINCE THEY USE THE ORACLE DATABASE SYSTEM. THANKS!"**

— JENNIFER ZUO, CONTINUING STUDIES STUDENT

# Tomorrow's openings will belong to Skilled Professionals

- UMass Lowell's certificate programs count towards numerous degree programs
- Many electives can be used to earn more than one certificate
- Multiple electives allow you to focus on specific areas of expertise
- A wide range of certificate programs are available online



"Recent articles in the Boston Globe and the Chronicle of Higher Education confirm the growing demand by adult learners for certificate programs."

Catherine A. Kendrick  
Director of Corporate and Distance Market Development,  
UMass Lowell, Division of Continuing, Corporate and  
Distance Education

## CERTIFICATE PROGRAMS

The following certificate programs are available on a part-time evening basis:

- Accounting
- Client/Server Database Design and Administration
- Community Policing
- Computer-Assisted Manufacturing
- Computer Engineering Technology
- Contemporary Communications
- Data/Telecommunications
- Electronics Technology
- Electro-Optics
- Environmental Technology
- Fundamentals of Information Technology
- Graphic Design and Digital Imaging
- Hazardous Waste Management
- Intranet Development
- Land Surveying
- Manufacturing Technology
- Multimedia Applications
- Nutrition
- Paralegal Studies
- Plastics Engineering Technology and Plastics Engineering Technology with Packaging Option
- Spanish
- Technical Writing
- UNIX
- Wastewater Treatment
- Water Treatment
- Website Design and Development



## FINISH YOUR DEGREE ON CAMPUS, ONLINE, OR BOTH!



### DEGREE PROGRAMS

The following degree programs are available on a part-time evening basis:

#### COLLEGE OF ENGINEERING

##### Associate's Degrees

- Civil Engineering Technology
- Civil Engineering Technology: Water Treatment Option
- Civil Engineering Technology: Wastewater Treatment Option
- Civil Engineering Technology: Surveying Option
- Electronic Engineering Technology
- Mechanical Engineering Technology

##### Bachelor's Degrees

- Civil Engineering Technology
- Civil Engineering Technology: Environmental Option
- Electronic Engineering Technology
- Mechanical Engineering Technology
- Mechanical Engineering Technology: Manufacturing Option
- Mechanical Engineering Technology: Plastics Option

#### COLLEGE OF ARTS AND SCIENCES

##### Associate's Degree

- Information Technology

##### Bachelor's Degrees

- Applied Mathematics
- Criminal Justice
- Criminal Justice: Paralegal Option
- Information Technology
- Information Technology: Business Minor Option
- Liberal Arts

#### COLLEGE OF MANAGEMENT

##### Associate's Degree

- Management

We know how busy you are, so at UMass Lowell we have organized our programs and services to help you reach your educational goals conveniently and effectively. A full range of degree options are available on a part-time basis. You can take individual courses to build certificates or degree programs and to fulfill your liberal arts requirements.

SEE HOW EASY IT IS TO COUNT YOUR CERTIFICATE PROGRAM COURSES TOWARDS A DEGREE! JOIN US AT OUR OPEN HOUSE ON MAY 13TH, OR CALL THE ADVISING CENTER AT (978) 934-2474!

## 10 REASONS TO PURSUE A DEGREE AT UML

- PURSUE A DEGREE AND CERTIFICATE AT THE SAME TIME WITH THE SAME COURSES
- FOCUS ON YOUR INTERESTS THROUGH OUR FLEXIBLE DEGREE STRUCTURE
- TRANSFER CREDITS FROM PAST INSTITUTIONS
- ACCELERATE YOUR DEGREE PROGRAM: EARN CREDITS BY PASSING SPECIAL DEPARTMENTAL EXAMS
- CUSTOMIZE YOUR PROGRAM WITH QUALITY ADVISORS
- COLLABORATE WITH FACULTY EXPERTS
- COMPETE IN THE MARKETPLACE WITH CUTTING-EDGE TECHNOLOGY SKILLS
- PURSUE COURSES ON-CAMPUS, ONLINE, OR AT CORPORATE LOCATIONS
- ENJOY HIGH-QUALITY PRESTIGE AND ACCREDITATION
- BOLSTER YOUR SUCCESS WITH PERSONALIZED ADVISING AND SUPPORT SERVICES

**NOW AVAILABLE:** Women's Studies Concentration in the Bachelor of Liberal Arts degree program. See <http://continuing.uml.edu/online> for details.  
Students who have graduated from high school or who have earned a high school equivalency certificate are invited to apply into these programs.

## SIGNATURE DEGREE PROGRAMS

### EARN A BACHELOR'S DEGREE

in Liberal Arts Part-Time... On Campus or Online!

*"I had taken a number of courses at another educational institution, but I wasn't able to finish my degree at that time. When I spoke with an advisor at UMass Lowell, they helped to determine how many of the courses I had taken elsewhere could be counted towards a part-time degree at UMass Lowell. After transferring a number of those courses into my program, I was able to complete my Bachelor's Degree in Liberal Arts by taking a combination of UMass Lowell's online and on campus courses. The advisors were extremely helpful and the flexibility of the program enabled me to complete the degree at a comfortable, convenient pace."*

— Sandra A. Bailey, Recent Graduate

Students interested in learning more about the University's bachelor's degree program in Liberal Arts can make an appointment for general advising or plan on coming to Continuing Studies' Summer Open House on May 13th. To make an appointment for advising or transfer credit evaluations, please contact Claire Murphy at (978) 934-2476 or email [Claire\\_Murphy@uml.edu](mailto:Claire_Murphy@uml.edu).

### EARN A B.S. IN INFORMATION TECHNOLOGY

ON CAMPUS OR ONLINE

#### THE BACHELOR'S DEGREE IN

### Information Technology



UMass Lowell offers adult learners a flexible Bachelor's Degree in Information Technology that accelerates degree completion.

Courses offered online, on campus, or as a mix can be applied to cutting-edge certificates and/or a full Associate's or Bachelor's Degree in Information Technology. Our faculty advisors will work with you to evaluate transfer credits and build a degree around your unique needs.

*"With the economy where it is, I knew I had to get a high-demand credential and that I had to do it quickly. By taking a mix of online and on-campus courses in Information Technology, I was able to accelerate my progress towards earning a degree in Information Technology."*

— Valerie Cox, Recent Graduate

**ALL THE COURSES YOU NEED TO COMPLETE YOUR DEGREE ARE AVAILABLE ON CAMPUS OR ONLINE AND ARE OFFERED THREE SEMESTERS PER YEAR:** Fall, Spring, & Summer.

## ONLINE DEGREES & CERTIFICATES

FIND OUT HOW EASY IT IS TO TAKE A COURSE OR COMPLETE YOUR  
**DEGREE ONLINE!**

JOIN US AT OUR FREE DISTANCE EDUCATION ORIENTATION ON TUESDAY,  
MAY 13TH! CALL 978-934-2474 TO RESERVE YOUR SEAT TODAY.

- \* Graduate & Undergraduate
- \* Fully Accredited
- \* Affordable Tuition

UMass Lowell's Distance Education program allows you to take classes from the convenience of your home or office. Register for one or two courses or pursue a degree or certificate program entirely online.

#### Online Undergraduate Degree Programs

- \* Associate's Degree in Information Technology
- \* Bachelor's Degree in Information Technology
- \* Bachelor's Degree in Information Technology: Business Minor
- \* Bachelor's Degree in Liberal Arts

#### Online Graduate Degree Programs

- \* Master's Degree in Educational Administration
- NEW!** \* Master's Degree in Criminal Justice

#### Online Undergraduate Certificate Programs

- \* Certificate in Contemporary Communications
- \* Certificate in Multimedia Applications
- \* Certificate in UNIX
- \* Certificate in Fundamentals of Information Technology
- \* Certificate in Intranet Development
- \* Certificate in Data/Telecommunications
- \* Certificate in Plastics Technology

#### Online Graduate Certificate Programs

- \* Certificate in Clinical Pathology
- \* Certificate in Photonics and Optoelectronics
- \* Certificate in Foundations of Business

Call (978) 934-2474 or visit <http://continuinged.uml.edu/online> to test drive a Distance Education course today!

The University of Massachusetts System offers additional courses and programs online. Visit [www.UMassOnline.net](http://www.UMassOnline.net) for more details.

Please note: There are no veteran or senior citizens waivers for distance learning courses. Please refer to page 18.

#### Looking for our online course listings?

They are now integrated into the Undergraduate & Graduate Course Listings on pages 8–16.

## This Summer Learn to Teach Online Without Commuting to Campus.

The UMass Lowell Online Teaching Institute will help you develop or enhance your online teaching skills. Our three to four week online courses will help you prepare for the fall semester.

#### Introduction to Online Teaching Strategies

00.054-031	May 27th – June 20th
00.054-032	June 25th – July 29th

#### Teaching Online with IntraLearn

00.055-031	July 7th – August 1st
00.055-032	August 4th – August 29th

#### Digital Media Streaming for your Online Course

00.056-031	July 7th – August 1st
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#### Teaching with Online Teams

00.057-031	July 7th – July 25th
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\$499 per person per session, special reduced rate if 3 or more participants attend from the same institution. For course descriptions or more information, call (978) 934-2142 or visit our website <http://continuinged.uml.edu/online/institutes.htm>

To register for a course call (978) 934-2700.

#### Online Education Course Registration and Confirmation

Students should make sure they have fulfilled the particular course prerequisites prior to registering for a course. To register for a UMass Lowell Online Education course, see the registration form on page 20, or call (978) 934-2700 or toll free (800) 480-3190. Be sure to provide your email address when you register!

All students are assigned a user name, password, and the Website address for their course. To obtain this information, each student must complete the Online Registration Confirmation. Visit the Online Education Website at <http://continuinged.uml.edu/online> and complete the Online Registration Confirmation two business days after registering for your course.

#### Student Technical Skills and Requirements

All students new to Online Education should complete the free Online Demonstration course available on the Online Education Website. Various internet utilities (e.g. mIRC, ftp, telnet) are required for some Online Education courses. Students are responsible for learning to use course-related utilities before enrolling in a Online Education course. Tutorials are available on the Online Education Website.

#### Online Course Software Requirements — Be sure to check our Website at <http://continuinged.uml.edu/online> to confirm course software requirements.

For the latest information regarding our online courses and programs, visit the Online Education website at: <http://continuinged.uml.edu/online> or call (978) 934-2474.

# CUSTOMIZED TRAINING

*Designed to meet your company's business needs*

\* [HTTP://CONTINUINGED.UML.EDU/CORPORATE](http://continuinged.uml.edu/corporate)

With a large selection of courses and expert instructors, the University of Massachusetts Lowell serves as an important educational resource for companies both nationally and internationally. The University — which is particularly well-known for its Engineering, Information Technology, Computer Science and Manufacturing programs — provides training to employees on campus and at numerous company locations.

UMass Lowell can develop new programs or courses that feature the industry-specific software and technologies your company uses most! Many other training areas are available...

**CALL (978) 934-2495 FOR A FREE BROCHURE!**

**UMASS LOWELL OFFERS state-of-the-art training**

**IN A VARIETY OF AREAS SUCH AS:**

Business Management  
C# Programming  
C & C++ Programming  
Computer Science  
Control Systems  
Data/Telecommunications

Engineering Technology  
Flash MX  
Information Technology  
Java Programming  
Linux  
Management Training  
Manufacturing Training

Marketing  
.NET Technologies  
Object-Oriented Software  
Development Using C++  
Oracle Architecture and  
Administration  
PL/SQL

Plastics Part Design  
Project Management  
Security  
Six Sigma  
UNIX  
Visual Basic.NET  
XML

**Summer 2003 (May – August 2003)**

## CORPORATE SIGNATURE SEMINAR SERIES

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Business Writing for Results  
Fundamentals of Investing  
Improving Performance Using Emotional Intelligence  
Project Management Training Program  
CRM — Customer Relationship Management  
*See Page 11 for dates and times on management seminars*

**Information Technology Seminars**  
Advances in Wireless Communications  
C# .NET for the Novice Software Developer  
C# .NET for the Experienced Software Developer  
C++ for the Novice Software Developer  
Java 2 for the Novice Software Developer  
Java 2 for the Advanced Software Developer  
Perl for the Novice Software Developer  
Visual Basic .NET

**Security Management Seminar**  
Security Management  
**Creative Arts/Media Seminars**  
Flash MX for Internet Developers  
Rich Internet Applications Using Flash MX  
  
Note: These seminars can also be delivered onsite at your company.

**FOR FURTHER INFORMATION ON THESE SEMINARS, DATES, LOCATIONS, AND TO REGISTER PLEASE CALL (978) 934-2405 FOR A DETAILED BROCHURE OR VISIT OUR WEBSITE AT [HTTP://CONTINUINGED.UML.EDU/CORPORATE](http://continuinged.uml.edu/corporate)**

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# May 19–June 27 Summer Session I

**Day Classes** begin on May 19 and meet Monday through Thursday for 3-credit courses and meet Monday through Friday for 4-credit courses.

**M/W Evening Classes** begin on May 19 and include 3 FRIDAYS: May 30, June 13, and June 27 at the regularly scheduled hours.

**T/Th Evening Classes** begin on May 20 and include 2 FRIDAYS: June 6 and June 20 at the regularly scheduled hours.

*Reminder: This course listing combines the University of Massachusetts Lowell day school courses and the continuing studies courses. It is important to check course numbers and prerequisites to ensure enrollment in the correct class.*

No.	Title	Eve	Time	Cr (Co)	P: Prerequisite C: Corequisite/Comments	Instructor
<b>Accounting</b>	60.201-011 Accounting/Financial	T/Th	6:00-9:00 pm	3		Charles Thompson
	60.201-031 Accounting/Financial (5/19-8/15)	>Online Course		3		Clairmont Carter
	60.202-011 Accounting/Managerial	M/W	6:00-9:00 pm	3	P: 60.201	Laura Scanlon
	60.202-031 Accounting/Managerial (5/19-8/15)	>Online Course		3	P: 60.201; requires proctored exams	Stephen Collins
	60.331-011 Cost Management Systems	M-Th	8:00-10:00 am	3	P: 60.202, BSBA students (non-Accounting majors), and College of Management Dean permission	John Hamer
CERTIFICATE IN ACCOUNTING						
<b>Art/Computer Graphics</b>	70.245-021 Desktop Publishing: Layout and Production w/Quark XPress (Mac) (5/19-8/15)	Thurs	7:00-10:00 pm	3	P: Basic Macintosh proficiency	Alison Poor-Donahue
	70.262-011 Digital Imaging and Photography: Photoshop/Windows	M/W	6:30-9:30 pm	3	P: Basic Windows proficiency	Ella Carlson
	70.264-011 Computer Graphics and Illustration: Adobe Illustrator/Mac	M/W	6:30-9:30 pm	3	P: Basic Macintosh proficiency	Alene Sirott-Cope
	70.291-021 Intro. to Graphic Design (5/19-8/15)	Tues	7:00-10:00 pm	3	P: Basic Macintosh or Windows proficiency	Alison Poor-Donahue
	70.379-011 Website Design/Windows	T/Th	7:00-10:00 pm	3	P: 90.238, and 90.231 or 70.262.	Jay Kamins
	70.385-021 Streaming Media for the Web/Windows (5/19-8/15)	Mon	6:30-9:30 pm	3	P: 70.379, 70.384	Michael Lucas
NOTE: While the above courses will not directly transfer into the Art Department's Bachelor of Fine Arts Day School degree program, certain two-course clusters may be accepted for transfer upon prior department approval.						
CERTIFICATE IN GRAPHIC DESIGN AND DIGITAL IMAGING (See page 3 for required courses.)						
CERTIFICATE IN WEBSITE DESIGN AND DEVELOPMENT (See page 3 for required courses.)						
<b>Art History</b>	58.101-011 Art Appreciation	T/Th	7:00-10:00 pm	3	AE, Cultural Diversity	Charles Giuliano
	58.203-031 History of Art I: Prehistoric to Medieval (5/19-8/15)	>Online Course		3	HSA, AE, Cultural Diversity	Liana Cheney
	58.204-031 History of Art II: Renaissance to Modern (5/19-8/15)	>Online Course		3	HSA, AE, Cultural Diversity	Liana Cheney
	58.221-011 Twentieth Century Art	M/W	7:00-10:00 pm	3		Cynthia Fowler
	58.350-011 Post Modernism (Contemporary Art)	M-Th	10:15 am-12:15 pm	3		Norma Steinberg
	58.494-011 Directed Studies	TBA	TBA	3	P: Instructor permission	Liana Cheney
<b>Biological Sciences</b>	58.496-011 Practicum in Art History	TBA	TBA	3	P: Instructor permission	Liana Cheney
	59.326-011 Multimedia for Cultural Studies	M/W	7:00-10:00 pm	3		Andy Alfano
<b>Chemical Sciences</b>	83.101-011 Life Science I	T/Th	6:00-9:00 pm	3	C: 83.103; SL	Valerie Graves
	83.214-031 Human Ecology (5/19-8/15)	>Online Course		3	SL	Priscilla Mattson
<b>Chemistry</b>	84.101-031 Applied Chemistry for Non-Scientists (5/19-8/15)	>Online Course		3	SL	Philip Lamprey
	84.111-011 General Chemistry I	M-Th	10:15 am-12:15 pm	3	C: 84.113; SL	Judith Goldsberry
	84.113-011 General Chemistry Lab I	M/W/Th	2:45-5:45 pm	1 (3)	C: 84.111; SL	Paul Damour
	84.121-011 Chemistry I	M/W	7:00-10:00 pm	3	C: 84.123; SL	Judith Goldsberry
	84.122-011 Chemistry II	M/W	7:00-10:00 pm	3	P: 84.121; C: 84.124; SL	Harold Garey
	84.123-011 Chemistry Lab I	T/Th	7:00-10:00 pm	1 (3)	C: 84.121; SL	Paul Damour
	84.124-011 Chemistry Lab II	T/Th	7:00-10:00 pm	1 (3)	C: 84.122; SL	John Sarabia
	84.221-011 Organic Chemistry I	M/T/Th	2:45-5:15 pm	3	P: 84.122; C: 84.229	Gene Davis
	84.221-012 Organic Chemistry I	T/Th	7:00-10:00 pm	3	P: 84.122; C: 84.229	Gene Davis
	84.229-011 Organic Chemistry Laboratory IA	T/Th	6:00-10:00 pm	1 (4)	C: 84.221	Judith Freeman
	84.229-012 Organic Chemistry Laboratory IA	M/W	6:00-10:00 pm	1 (4)	C: 84.221	Judith Freeman
<b>Cinema</b>	52.325-011 Italian Cinema and Culture	M-Th	8:00-10:00 am	3	VCA	Mario Aste
	52.335-011 Cinema and Italian Americans	M-Th	10:15 am-12:15 pm	3	VCA	Mario Aste
<b>Civil and Environmental Engineering</b>	14.203-011 Statics (alternate 22.211)	M-Th	12:30-2:30 pm	3	P: 92.132, 95.141	M. G. Reardon
	14.204-011 Strength of Materials (alternate 22.212)	M-Th	8:00-10:00 am	3	P: 14.203	Faize Jamil
<b>Civil Engineering Technology</b>	15.113-011 CAD	T/Th	7:00-10:00 pm	2 (3)	P: 23.101 or instructor permission	Kevin Gagne
	15.131-011 Environmental Chemistry	M/W	7:00-10:00 pm	3	SL	Charles Panagiotakos
CERTIFICATE IN HAZARDOUS WASTE MANAGEMENT						
CERTIFICATE IN ENVIRONMENTAL TECHNOLOGY						
<b>Civil Engineering Technology Water/Wastewater Option</b>	CERTIFICATE IN HAZARDOUS WASTE MANAGEMENT					
	CERTIFICATE IN ENVIRONMENTAL TECHNOLOGY					
<b>Client/Server Technology</b>	(See courses listed under Information Technology.)					
CERTIFICATE IN CLIENT/SERVER DATABASE DESIGN AND ADMINISTRATION (See page 4 for required courses.)						
<b>Computer Mathematics</b>	(See courses listed under Information Technology.)					
<b>Computer Science</b>	91.113-011 Exploring the Internet	M/W	6:30-9:30 pm	3	Non-CS Majors only	Peter Weston
	91.113-031 Exploring the Internet (5/19-8/15)	>Online Course		3	Non-CS Majors only	Patrick Krolak
	91.201-021 Computing III (5/19-8/22)	T/Th	4:00-5:15 pm	4	P: 91.102; requires permission of Computer Science Chair	Department Faculty
	94.301-021* Organization of Programming Languages (5/19-8/22)	TBA	TBA	3	P: 91.250 or equivalent	Department Faculty
	94.305-021* Computer Architecture (5/19-8/22)	TBA	TBA	3	P: 91.250 or equivalent	Department Faculty
	94.308-021* Introduction to Operating Systems (5/19-8/22)	Wed	5:00-8:00 pm	3	P: 94.305, 91.250 or equivalent	Department Faculty
	94.404-021* Analysis of Algorithms (5/19-8/22)	TBA	TBA	3	P: 91.250, 91.322	Department Faculty

\*Requires Graduate Coordinator permission.

# ACADEMIC CREDIT COURSE LISTING

	No.	Title	Eve	Time	Cr (Co)	P: Prerequisite C: Corequisite/Comments	Instructor		
<b>Criminal Justice (See also Paralegal Studies)</b>	44.101-011	Introduction to the Criminal Justice System	T/Th	7:00-10:00 pm	3		Joseph Burke		
	44.111-011	Introduction to Industrial Security	M/W	6:00-9:00 pm	3		Allan Roscoe		
	44.478-011	Child Maltreatment	T/Th	6:00-9:00 pm	3		Alicen McGowan		
	44.496-011	Criminal Justice Practicum	TBA	TBA	3	P: Instructor permission	Allan Roscoe		
	CERTIFICATE IN COMMUNITY POLICING								
	CERTIFICATE IN PARALEGAL STUDIES								
<b>Economics</b>	49.201-011	Economics I (Microeconomics)	M-Th	8:00-10:00 am	3	P: 90.111; BS	Ronald Hemenway		
	49.201-012	Economics I (Microeconomics)	T/Th	6:00-9:00 pm	3	P: 90.111; BS	Ronald Olive		
	49.201-031	Economics I (Microeconomics) (5/19-8/15)	> Online Course		3	P: 90.111; BS	Michael Carter		
	49.201-032	Economics I (Microeconomics) (5/19-8/15)	> Online Course		3	P: 90.111; BS	Ilter Bakkal		
	49.202-011	Economics II (Macroeconomics)	M/W	6:00-9:00 pm	3	P: 90.111; BS	Patricia Machado		
	49.202-031	Economics II (Macroeconomics) (5/19-8/15)	> Online Course		3	P: 90.111; BS	Michael Carter		
	49.211-011	Statistics I	M-Th	10:15 am-12:15 pm	3	P: 92.122 or equivalent	Harjeet Khosla		
	49.211-012	Statistics I	M/W	6:00-9:00 pm	3	P: 92.122 or equivalent	Harjeet Khosla		
<b>Electrical and Computer Engineering</b>	16.201-021*	Circuit Theory I (5/19-7/22)	M/W	2:00-4:00 pm	3	P: 92.132; C: 16.207	Mufeed Mah'd		
	16.202-021*	Circuit Theory II (5/19-7/22)	M/W	10:15 am-12:15 pm	3	P: 16.201; C: 16.208	Tenneti Rao		
	16.207-021*	Circuits I Lab (5/19-7/22)	Mon	4:00-7:00 pm	2 (3)	P: 92.132; C: 16.201	Department Faculty		
	16.207-022*	Circuits I Lab (5/19-7/22)	Wed	7:00-10:00 pm	2 (3)	P: 92.132; C: 16.201	Department Faculty		
	16.208-021*	Circuits II Lab (5/19-7/22)	Thurs	4:00-7:00 pm	2 (3)	P: 16.207; C: 16.202	Department Faculty		
	16.208-022*	Circuits II Lab (5/19-7/22)	Thurs	7:00-10:00 pm	2 (3)	P: 16.207; C: 16.202	Department Faculty		
	16.265-021*	Logic Design (5/19-7/22)	T/Th	10:15 am-12:15 pm	3	P: 25.108 or 91.101	Anh Tran		
	16.311-011	Electronics I Lab (5/19-7/22)	Tues	4:00-7:00 pm	2 (3)	P: 16.202; C: 16.365	Alan Rux		
	16.311-012	Electronics I Lab (5/19-7/22)	Thurs	7:00-10:00 pm	2 (3)	P: 16.202; C: 16.365	Alan Rux		
	16.317-021*	Microprocessor System Design (5/19-7/22)	T/Th	10:15 am-12:15 pm	3	P: 16.265; C: 16.365	Adam Elbirt		
	16.363-021*	Signals and Systems II (5/19-7/22)	M/W	6:00-8:00 pm	3	P: 16.362	Richard Cornely		
	16.364-021*	Engineering Math (5/19-7/22)	M/W	10:15 am-12:15 pm	3	P: 92.234 & 16.201	A. J. Noushin		
	16.365-021*	Electronics I (5/19-7/22)	M/W	10:15 am-12:15 pm	3	P: 16.202, 92.238; C: 16.311	Mufeed Mah'd		
	16.410-011	Project Laboratory	TBA	TBA	3	P: Department Faculty permission	Ziyad Salameh		
	16.453-021*	Software Engineering (5/19-7/22)	T/Th	6:00-8:00 pm	3	P: 16.216 16.322	Marc Bumble		
	16.491-011	Industrial Experience	TBA	TBA	3	P: Permission by Alan Rux	Alan Rux		
	16.492-011	Industrial Experience	TBA	TBA	3	P: Permission by Alan Rux	Alan Rux		
	16.493-011	Industrial Experience	TBA	TBA	3	P: Permission by Alan Rux	Alan Rux		
	*Note: The above asterisked courses are held from May 19-July 22. M/W courses begin May 19 with the final exam on July 21.								
	T/Th courses begin May 20 with the final exam on July 22.								
<b>Electronic Engineering Technology</b>	17.130-011	Electrical Basics and Laboratory	T/Th	7:00-10:00 pm	2 (3)	P: Instructor permission; not available for E.E.T. majors	Jan Yang		
	17.201-031	Introduction to Fiber Optics (5/19-8/15)	> Online Course		3	P: Algebra and Trigonometry background	Sandip Sengupta		
	CERTIFICATE IN COMPUTER ENGINEERING TECHNOLOGY (See page 4 for required courses.)								
	CERTIFICATE IN ELECTRONICS TECHNOLOGY (See page 4 for required courses.)								
	CERTIFICATE IN ELECTRO-OPTICS TECHNOLOGY								
<b>English</b>	42.101-011*	College Writing I	M-Th	8:00-10:00 am	3		William Coughlin		
	42.101-031*	College Writing I (5/19-8/15)	> Online Course		3	P: Requires MS Word	Richard Keating		
	42.101-032*	College Writing I (5/19-8/15)	> Online Course		3	P: Requires MS Word	William Allen		
	42.102-011	College Writing II	M-Th	10:15 am-12:15 pm	3	P: 42.101	William Coughlin		
	42.102-012	College Writing II	T/Th	7:00-10:00 pm	3	P: 42.101	Clifford Lewis		
	42.102-031	College Writing II (5/19-8/15)	> Online Course		3	P: 42.101; requires MS Word	Marie Salamone		
	42.102-032	College Writing II (5/19-8/15)	> Online Course		3	P: 42.101; requires MS Word	Marie Salamone		
	42.103-011*	College Writing I for International Students	T/Th	6:00-9:00 pm	3		Department Faculty		
	42.212-011	The Short Story	M-Th	8:00-10:00 am	3	P: 42.102; LT	Todd Avery		
	42.212-031	The Short Story (5/19-8/15)	> Online Course		3	P: 42.102; LT; requires MS Word	Ashmita Khasnabish		
	42.217-011	The Horror Story	T/Th	7:00-10:00 pm	3	P: 42.102; LT	Todd Avery		
	42.224-031**	Business Writing (5/19-8/15)	> Online Course		3	P: 42.102; requires MS Word	Nancy Brown		
	42.224-032**	Business Writing (5/19-8/15)	> Online Course		3	P: 42.102; requires MS Word	Nancy Brown		
	42.226-011**	Technical and Scientific Communication	T/Th	7:00-10:00 pm	3	P: 42.102	Peter Payack		
	42.226-031**	Technical and Scientific Communication (5/19-8/15)	> Online Course		3	P: 42.102; requires MS Word	Peter Payack		
	42.232-011	Turning Fiction into Film	M/W	7:00-10:00 pm	3	P: 42.102; LT	Dina Bozicas		
	42.282-011	Crime in Literature	M-Th	8:00-10:00 am	3	P: 42.102; LT	William Hersey		
	42.294-011	History of American Literature I	M-Th	10:15 am-12:15 pm	3	P: 42.102; LT	Anthony Szczesniak		
	42.302-011	Creative Writing: Fiction	M/W	7:00-10:00 pm	3	P: 42.102	Jay Atkinson		
	42.303-011	Creative Writing: Poetry	T/Th	7:00-10:00 pm	3	P: 42.102	Gregoire Turgeon		
	42.403-021	Advanced Software Writing	Tues	6:00-9:00 pm	3	P: 42.402	Stephen Murphy		
	*Students will not receive credit for both 42.101 and 42.103.								
	**Students may not receive credit for both 42.224 and 42.226								
	CERTIFICATE IN TECHNICAL WRITING								
<b>Environmental Science</b>	87.115-011	Astronomy	T/Th	7:00-10:00 pm	3	SL	Arnold O'Brien		
	87.117-011	Astronomy Lab	M/W	7:00-10:00 pm	1 (2)	SL	Arnold O'Brien		
<b>Graphic Design and Digital Imaging</b>	(See courses listed under Art and Information Technology.)								
	CERTIFICATE IN GRAPHIC DESIGN AND DIGITAL IMAGING (See page 3 for required courses.)								
<b>Health Professions</b>	30.201-031	Community Health (5/19-8/15)	> Online Course		3	Open to all students	Nicole Champagne		
	30.315-011	Kinesiology and Lab	M-F	10:15 am-12:15 pm	4	P: Two semesters each: Anatomy and Physiology, Physics; not open to UMass Lowell Exercise Physiology majors	Department Faculty		
	35.101-011	Human Anatomy and Physiology I	T/Th	6:15-9:15 pm	3	C: 35.103; SL	Paul Fierimonte		
	35.103-011	Human Anatomy and Physiology I Lab	T/W/Th	2:00-5:00 pm	1 (3)	C: 35.101; SL	Alease Bruce		
	35.356-011	Pharmacology	M-Th	8:00-10:00 am	3	P: 35.252	Arthur Vergados		
	36.350-011	Human Biochemistry	M-Th	11:00 am-1:00 pm	3	P: 35.252 or equivalent	Thomas Wilson		
	36.414-031	Infectious Disease (5/19-8/15)	> Online Course		3	P: One semester of General Microbiology	S. Fessia - Richardson		
	CERTIFICATE IN NUTRITION								
<b>History (See also Art History)</b>	43.105-011	Western Civilization to 1715	M-Th	8:00-10:00 am	3	HS	Diane Lewis		
	43.206-031	American Economic History (5/19-8/15)	> Online Course		3	HS	Joseph Lipchitz		
	43.242-031	The Second World War (5/19-8/15)	> Online Course		3	HS; requires proctored exams	Donald Mattheisen		
	43.274-031	Native American History (5/19-8/15)	> Online Course		3	HS; requires proctored exams	Diane Lewis		
	<b>NEW! 43.334-011</b>	<b>The French Revolution and Napoleon</b>	T/Th	6:00-9:00 pm	3	HS	<b>Stephen Russell</b>		
	43.371-011	Medieval Institutions	M-Th	10:15 am-12:15 pm	3	HS	Joseph Lipchitz		
	<b>NEW! 43.382-011</b>	<b>The American West</b>	M/W	6:00-9:00 pm	3	HS	Mark Herlihy		
<b>Information Technology including Multimedia and Graphics</b>	90.160-011	Introduction to Information Systems	T/Th	6:00					

# ACADEMIC CREDIT COURSE LISTING

No.	Title	Eve	Time	Cr (Co)	P: Prerequisite C: Corequisite/Comments	Instructor
90.211-011*	Intro. to Programming with C - Part I	T/Th	7:00-10:00 pm	3	P: No previous prog. experience required	Fuquan Gao
90.211-031*	Intro. to Programming with C - Part I (5/19-8/15)		> Online Course	3	P: No previous prog. experience required; ANSI C/C++ standard compiler required	James Sears
90.211-032*	Intro. to Programming with C - Part I (5/19-8/15)		> Online Course	3	P: No previous prog. experience required; ANSI C/C++ standard compiler required	James Sears
90.212-011*	Introduction to Programming with C - Part II	M/W	6:00-9:00 pm	3	P: 90.211	Lee Clark
90.212-031*	Intro. to Programming with C - Part II (5/19-8/15)		> Online Course	3	P: 90.211; req. ANSI C/C++ standard compiler	Lisa Panagopoulos
90.220-011	Visual Basic	T/Th	7:00-10:00 pm	3	P: Requires Visual Basic.NET	Leo Javis
90.220-031	Visual Basic (5/19-8/15)		> Online Course	3	P: Familiarity with Windows and working knowledge of a high-level language; requires Visual Basic.NET	Carol Thomas
90.224-031	Advanced Visual Basic (5/19-8/15)		> Online Course	3	P: 90.220, familiarity with Visual Basic.NET; requires Visual Basic.NET	Carol Thomas
<b>NEW!</b> 78.201-021	Intro to Audio for Multimedia and the Web/Windows (See Summer II Schedule on page 14)					
90.230-011	Intro to Multimedia/Windows	T/Th	7:00-10:00 pm	3	P: Basic Mac or Windows proficiency	Chris Perry
90.230-031	Introduction to Multimedia (5/19-8/15)		> Online Course	3	P: Basic Mac or Windows proficiency; requires eZedia MX software	Rob Graham
90.230-032	Introduction to Multimedia (5/19-8/15)		> Online Course	3	P: Basic Mac or Windows proficiency; requires eZedia MX software	Joy Steinberg
90.231-011	Graphics for Multimedia and the World Wide Web/Windows	M/W	6:30-9:30 pm	3	P: 90.230	Marina Javis
90.231-031	Graphics for Multimedia and the World Wide Web/Windows (5/19-8/15)		> Online Course	3	P: 90.230; requires Photoshop 5.0 or higher; access to a scanner	Randy Howe
90.232-031	Desktop Video Production (5/19-8/15)		> Online Course	3	P: 90.230; requires Adobe Premiere	Michael Murie
90.233-031	Multimedia Authoring Software: Director (5/19-8/15)		> Online Course	3	P: 90.230 or instructor permission; requires Macromedia Director MX	Beatrice Lee
90.234-031	Designing and Developing Interactive Media/Windows (5/19-8/15)		> Online Course	3	P: 90.230, 90.231, 90.232, 90.233 or instructor permission	Rob Graham
90.238-011	Website Development: FrontPage/Windows	T/Th	7:00-10:00 pm	3	P: 90.291; 90.231 recommended	Janine Jacques
90.238-031	Website Development: Front Page/Windows (5/19-8/15)		> Online Course	3	P: 90.291; 90.231 recommended; requires MS FrontPage 2002 (Academic Version but not FrontPage Express)	Judith Feeney
90.247-031	Advanced Web Authoring: Flash (5/19-8/15)		> Online Course	3	P: 90.291, 90.302 or prog. familiarity; requires Macromedia Flash MX	Michael Murie
90.267-011*	C Programming	T/Th	6:00-9:00 pm	3	P: Previous programming experience	Nancy Kiernan
90.267-012*	C Programming	M/W	7:00-10:00 pm	3	P: Previous programming experience	Timothy Niesen
90.267-031*	C Programming (5/19-8/15)		> Online Course	3	P: Previous programming experience; requires C compiler software	Timothy Niesen
90.267-032*	C Programming (5/19-8/15)		> Online Course	3	P: Previous prog. experience; requires C compiler software	Ann Marie Hurley
90.268-011	C++ Programming	T/Th	7:00-10:00 pm	3	P: 90.267 or 90.212	Joseph Russell
90.268-012	C++ Programming	M/W	7:00-10:00 pm	3	P: 90.267 or 90.212	Thomas Kostizak
90.268-031	C++ Programming (5/19-8/15)		> Online Course	3	P: 90.267 or 90.212; req. C++ compiler software	Mark Hertel
90.269-031	Advanced C++ (5/19-8/15)		> Online Course	3	P: 90.268, exper. with Data Structures; requires C++ compiler software	Mark Hertel
90.270-031	Visual C++ (5/19-8/15)		> Online Course	3	P: 90.268; requires Visual Studio.NET	Barbara Bancroft
<b>NEW!</b> 90.271-011	C# (C Sharp)	T/Th	7:00-10:00 pm	3	P: 90.268 or 90.301	James Brzowksi
90.291-031	Introduction to DHTML (5/19-8/15)		> Online Course	3		William Dubie
90.291-032	Introduction to DHTML (5/19-8/15)		> Online Course	3		Margaret Burke
90.292-011	Advanced DHTML	M/W	7:00-10:00 pm	3	P: 90.291	David Sciuto
90.292-031	Advanced DHTML (5/19-8/15)		> Online Course	3	P: 90.291	Isobel Davis
90.297-011	Introduction to Java Programming	M/W	6:30-9:30 pm	3	P: Previous prog. experience required	Department Faculty
90.297-031	Intro. to Java Programming (5/19-8/15)		> Online Course	3	P: Previous prog. experience required; Sun Java Development Kit required	Lance Smith
90.301-011	Java Programming/Windows	T/Th	7:00-10:00 pm	3	P: 90.297 or 90.268	Elizabeth Kramer
90.301-031	Java Programming (5/19-8/15)		> Online Course	3	P: 90.297 or 90.268; requires Sun Java Development Kit	Mark Cohen
90.302-011	JavaScript	T/Th	7:00-10:00 pm	3	P: 90.291 or knowledge of HTML	David Sciuto
90.303-021	Advanced Java Programming (5/19-8/15)	Thurs	6:30-9:30 pm	3	P: 90.301	Siva Ghatti
90.303-031	Advanced Java Programming (5/19-8/15)		> Online Course	3	P: 90.301; req. Sun Java Development Kit	Fred Yao
90.305-011	Introduction to Perl	T/Th	7:00-10:00 pm	3	P: 90.267	Jonathan Worthley
90.305-031	Introduction to Perl (5/19-8/15)		> Online Course	3	P: 90.267	Gregory Rushton
90.307-031	Advanced Topics in Java and XML (5/19-8/15)		> Online Course	3	P: 90.303, 90.306; requires Sun Java Development Kit	Mark Cohen
90.311-011	Introduction to the UNIX Operating System	T/Th	7:00-10:00 pm	3		Andrew Garside
90.311-012	Introduction to the UNIX Operating System	M/W	7:00-10:00 pm	3		Partha Mittra
90.311-031	Introduction to the UNIX Operating System (5/19-8/15)		> Online Course	3		Fred Vegliante
90.311-032	Introduction to the UNIX Operating System (5/19-8/15)		> Online Course	3		Sean McGowan
90.312-011	UNIX Shell Programming	M/W	7:00-10:00 pm	3	P: 90.311, and 90.267 or 90.212	Sean McGowan
90.312-031	UNIX Shell Programming (5/19-8/15)		> Online Course	3	P: 90.311, and 90.267 or 90.212	Michael Richards
90.319-031	Introduction to Linux (5/19-8/15)		> Online Course	3	P: Requires Red Hat Standard Ed. Version 8.0	Justin Seiferth
<b>NEW!</b> 90.320-031	Shell Scripting Using Linux (5/19-8/15)		> Online Course	3	P: 90.319; requires Red Hat Standard Ed. Version 8.0	Justin Seiferth
90.321-031	Linux System Administration (5/19-8/15)		> Online Course	3	P: Shell Scripting experience; requires Red Hat Standard Ed. Version 8.0	Barbara Bancroft
90.360-021	Introduction to Data Structures Using C (5/19-8/15)	Tues	6:30-9:30 pm	3	P: 90.364, and 90.267 or 90.212	Siva Ghatti
90.360-031	Introduction to Data Structures Using C (5/19-8/15)		> Online Course	3	P: 90.364, and 90.267 or 90.212	Isobel Davis
90.364-011	Problem Solving with C	M/W	7:00-10:00 pm	3	P: 90.212 or 90.267	Lisa Panagopoulos
90.364-031	Problem Solving with C (5/19-8/15)		> Online Course	3	P: 90.212 or 90.267	Sean McGowan
90.443-011	Fundamentals of Client/Server Computing	T/Th	6:00-9:00 pm	3		Umesh Bhargava
90.450-021	Oracle Architecture and Administration (5/19-8/15)	Mon	7:00-10:00 pm	3	P: 90.474	James Cole
90.450-022	Oracle Architecture and Administration (5/19-8/15)	Tues	7:00-10:00 pm	3	P: 90.474	James Cole
90.454-021	Oracle Structured Query Language (SQL)	Sat	9:00 am-12:00 pm	3	P: 90.474	Jeff Yang
90.457-011	Network Security	M/W	7:00-10:00 pm	3	P: 90.463 or instructor permission	Tak Yin Wong
90.459-021	Oracle Procedural Language Development (5/19-8/15)	Wed	7:00-10:00 pm	3	P: 90.454	Leon Xia
90.461-011	LAN/WAN Technologies	T/Th	6:00-9:00 pm	3	P: 90.267 or previous prog. experience	Jaime Fernandez

# ACADEMIC CREDIT COURSE LISTING

No.	Title	Eve	Time	Cr (Co)	P: Prerequisite C: Corequisite/Comments	Instructor
90.461-031	LAN/WAN Technologies (5/19-8/15)	>Online Course		3	P: 90.267 or previous prog. experience	Ed Barnes
90.462-011	TCP/IP and Network Architecture	M/W	6:00-9:00 pm	3	P: 90.461	Arvind Kukreja
90.462-031	TCP/IP and Network Architecture (5/19-8/15)	>Online Course		3	P: 90.461	Ed Barnes
90.463-011	Advanced Networking Technology	M/W	7:00-10:00 pm	3	P: 90.461	Krishnajee Putcha
90.464-031	Network Management (5/19-8/15)	>Online Course		3	P: 90.461	Jaime Fernandez
90.474-021	Relational Database Concepts (5/19-8/15)	Thurs	7:00-10:00 pm	3	P: 90.267	Robert Demers
90.474-031	Relational Database Concepts (5/19-8/15)	>Online Course		3	P: 90.267	Paul Giguere
90.480-031	Project-Based Information Systems (5/19-8/15)	>Online Course		6	P: Junior status; can be used to replace the sequence of 90.477 and 90.478	Jon Forsyth
<b>NEW!</b> 90.483-011	Wireless Communications (Held at Veterans Admin. Medical Center, Bedford, MA)	T/Th	6:00-9:00 pm	3	P: 90.463 or instructor permission	Krishnajee Putcha
<b>NEW!</b> 90.484-011	Optical Networking SONET/SDH	M/W	7:00-10:00 pm	3	P: 90.463 or instructor permission	Faize Jamil
<b>NEW!</b> 90.486-011	MultiProtocol Label Switching (MPLS)	T/Th	7:00-10:00 pm	3	P: 90.462 or instructor permission	Jerry Nadler
*Students will not receive credit for both 90.267 and the 90.211/90.212 sequence. FOR INFORMATION TECHNOLOGY CERTIFICATES, SEE PAGES 3-4.						
<b>Languages</b>						
52.325-011	Italian Cinema and Culture	M-Th	8:00-10:00 am	3	VCA	Mario Aste
52.335-011	Cinema and Italian Americans	M-Th	10:15 am-12:15 pm	3	VCA	Mario Aste
54.101-011	Beginning Spanish I	M-Th	8:00-10:00 am	3		J. Heli Hernandez
54.101-012	Beginning Spanish I	M/W	7:00-10:00 pm	3		Margot Girodet
54.211-011	Intermediate Conversational Spanish I	M-Th	10:15 am-12:15 pm	3	P: 54.102 or equivalent	J. Heli Hernandez
54.211-012	Intermediate Conversational Spanish I	TBA	7:00-10:00 pm	3	P: 54.102 or equivalent	Department Faculty
CERTIFICATE IN SPANISH						
<b>Legal Studies (See also Paralegal Studies)</b>						
41.262-011	Introduction to Business Law	T/Th	7:00-10:00 pm	3	BS, Collateral to Criminal Justice	William Burke
41.363-011	Corporate and Property Law	T/Th	7:00-10:00 pm	3		Eugene Reardon
41.367-011	Environmental Law	M/W	7:00-10:00 pm	3		William Burke
41.376-011	Family Law	M/W	7:00-10:00 pm	3		Russell Karl
41.497-011	Paralegal Practicum	TBA	TBA	3	P: Minimum of three paralegal courses and permission of Prof. William Burke, Coord., Legal Studies; call (978) 934-2765	William Burke
CERTIFICATE IN PARALEGAL STUDIES						
<b>Management</b>						
61.301-011	Business Finance	M/W	6:00-9:00 pm	3	P: 60.202, 49.201, 49.202, COM filter courses, BSBA majors or Business Minor/BSIT/ASIT with 54+ credits and College of Mgmt. Dean permission	Frank Andrews
63.210-011	Operations Analysis Techniques	M/W	8:00-11:00 am	3	P: 49.211	M. Riaz Khan
63.407-031	E-Business (5/19-7/11)	>Online Course		3	P: 63.403, and 63.405; BSBA/MIS concentration and College of Mgmt. Dean permission; req. proctored exams	Luvai Motiwalla
66.301-031	Organizational Behavior (5/19-7/11)	>Online Course		3	P: COM filter courses, BSBA majors or Business minor/BSIT/ASIT with 54+ credits and College of Mgmt. Dean permission; req. proctored exams	Stuart Freedman
66.490-011	Strategic Management	T/Th	9:00 am-Noon	3	P: Graduating seniors only; BSBA students and College of Mgmt. Dean permission	Ashwin Mehta
69.253 Introduction to Management and Organizational Behavior is no longer offered. BSBA majors and BSIT/ASIT majors with the Business Minor will substitute 66.301 after 54+ credits.						
<b>NEW!</b> 00.401-041	Security Management Seminar (Meets May 20 & 21st; Held at VA Medical Ctr in Bedford, MA; Tuition: \$775)	T/W	9:00 am-5:00 pm	NC	Noncredit; 1.5 CEUs awarded.	Allan Roscoe
<b>NEW!</b> 00.601-041	Effective Business Writing (Meets June 4, 11, 18, 25 - Tuition: \$300)	Wed	7:00-9:00 pm	NC	Noncredit; .08 CEUs awarded.	Sharyn Gallagher
<b>NEW!</b> 00.602-041	Fundamentals of Investing (Meets 1 Evening: May 29; Tuition: \$150)	Thurs	6:30-9:30pm	NC	Noncredit; .03 CEUs awarded	Frank Andrews
<b>NEW!</b> 00.602-042	Fundamentals of Investing (Meets 1 Evening: June 17; Tuition: \$150)	Tues	6:30-9:30pm	NC	Noncredit; .03 CEUs awarded	Frank Andrews
<b>NEW!</b> 00.604-041	Project Management Training (Meets June 10, 12, 17, 19, 24 & 26; Held at VA Medical Ctr in Bedford, MA; Tuition: \$695)	T/Th	6:00-10:00 pm	NC	Noncredit; 2.4 CEUs awarded.	Bernie Cookson
<b>Mathematics</b>						
90.111-011*	Fundamentals of Algebra	T/Th	7:00-10:00 pm	3		Anthony Sokolowski
92.111-011	Quantitative Reasoning (formerly Math Perspectives)	M-Th	10:15 am-12:15 pm	3	P: Two years of high school algebra; Liberal Arts majors only; no credit toward a degree in science or engineering; MA	Alan Kaplan
92.121-011**	Precalculus Mathematics	M-Th	8:00-10:00 am	3	P: 90.111 or equivalent; MA	Alan Kaplan
92.121-012**	Precalculus Mathematics	T/Th	6:30-9:30 pm	3	P: 90.111 or equivalent; MA	Candice Weston
92.121-031**	Precalculus Mathematics (5/19-8/15)	>Online Course		3	P: 90.111 or equivalent; MA; designed for students who can work independently in math; may require proctored exams	Alan Doerr
92.122-011	Management Calculus	M-Th	10:15 am-12:15 pm	3	P: 92.119 or 92.121 or equivalent; not for science or engineering majors; MA	Cindy Hill
92.122-012	Management Calculus	M/W	6:00-9:00 pm	3	P: 92.119 or 92.121 or equivalent; not for science or engineering majors; MA	Patricia Gifford
92.123-011	Precalculus Mathematics II	M/W	6:00-9:00 pm	3	P: 92.121; MA	Department Faculty
92.125-011	Calculus A	T/Th	6:00-9:00 pm	3	P: 92.123; MA	Robert Gravina
92.126-011	Calculus B	M/W	6:00-9:00 pm	3	P: 92.125; MA	Theresa Schille
92.127-021	Calculus IA (5/19-8/15)	M/W/F	8:00-10:00 am	4	MA	Candice Weston
92.127-022	Calculus IA (5/19-8/15)	M/W/F	8:00-10:00 am	4	MA	Department Faculty
92.131-021	Calculus I (5/19-8/15)	M/W/F	8:00-10:00 am	4	MA	John Lahoud
92.131-022	Calculus I (5/19-8/15)	M/W/F	10:15 am-12:15 pm	4	MA	John Lahoud
92.132-021	Calculus II (5/19-8/15)	M/W/F	8:00-10:00 am	4	P: 92.131; MA	Marvin Stick
92.132-022	Calculus II (5/19-8/15)	M/W/F	10:15 am-12:15 pm	4	P: 92.131; MA	Marvin Stick
92.183-011	Introduction to Statistics	M-Th	8:00-10:00 am	3	P: 90.111 or equivalent; MA	Alexander Olsen
92.183-012	Introduction to Statistics	T/Th	6:00-9:00 pm	3	P: 90.111 or equivalent; MA	Alexander Olsen
92.183-031	Introduction to Statistics (5/19-8/15)	>Online Course		3	P: 90.111 or equivalent; MA	Ann Marie Hurley
92.225-011	Calculus C	T/Th	6:00-9:00 pm	3	P: 92.126; MA	Philip Breen
92.231-011	Calculus III	M-F	10:15 am-12:15 pm	4		Vidhu Prasad
92.236-011	Differential Equations (previously 92.234)	M-Th	8:00-10:00 am	3	P: 90.112 or 92.121	Vidhu Prasad
92.236-012	Differential Equations (previously 92.234)	T/Th	6:00-9:00 pm	3	P: 90.112 or 92.121	Robert Johnson
92.321-011	Discrete Structures I	T/Th	3:15-6:15 pm	3	P: 90.112 or 92.121	Alan Doerr
92.321-031	Discrete Structures I (5/19-8/15)	>Online Course		3	P: 90.112 or 92.121; designed for students who can work independently in math; may require proctored exams	Alan Doerr
92.322-011	Discrete Structures II	M-Th	10:15 am-12:15 pm	3	P: 92.321	Alan Doerr
92.363-011	Introduction to Data Analysis	M-Th	10:15 am-12:15 pm	3	P: 92.183 or equivalent; MA	Alexander Olsen
92.386-011	Statistics for Engineering and Science	M/W	6:00-9:00 pm	3	P: Two semesters of calculus and one semester of programming	Chittur Venkatesh
92.407-011	Probability and Mathematical Statistics I	M/W	6:00-9:00 pm	3	P: 92.126 or 92.132 or equivalent	Chittur Venkatesh
92.419-031	Introduction to Mathematica® (5/19-8/15)	>Online Course		3	P: 2 semesters of Calculus and a prog. course; requires Mathematica® software	Kenneth Levasseur
92.421-011	Abstract Algebra I	M/W	6:00-9:00 pm	3	C: 96.103	Kenneth Levasseur

# ACADEMIC CREDIT COURSE LISTING

No.	Title	Eve	Time	Cr (Co)	P: Prerequisite C: Corequisite/Comments	Instructor		
92.435-011 <b>NEW!</b>	History of Mathematics	T/Th	6:00-9:00 pm	3	P: Calculus	Joyce Williams		
92.488-021	Statistical Quality Control (5/19-8/15)	Wed	6:00-9:00 pm	3	P: 92.386 or equivalent	Shelley Rasmussen		
*Fundamentals of Algebra (90.111) is a preparatory course and cannot be credited toward a degree program at the University of Massachusetts Lowell. **Students will not receive credit for both 90.112 and 92.121. For students in the Information Systems Program, 92.121 can be substituted for the combination of 90.112 and 90.119. University of Massachusetts Lowell Days students must have approval from their Department Chairperson before taking courses with a 90 prefix. Many 500-level courses are well within the grasp of upper level undergraduates and may be used as electives. Contact the Graduate School for course listings and admissions procedures.								
<b>Mechanical Engineering</b>	22.211-011 Statics (alternate 14.203) 22.212-011 Strength of Materials (alternate 14.204) 22.403-011 Mechanical Engineering Laboratory II	M-Th M-Th T/Th	12:30-2:30 pm 8:00-10:00 am 4:00-8:00 pm	3 3 3 (4)	P: 92.132, 95.141 P: 22.211, 22.302, 22.384 P: 22.302, 22.311, 22.341, 22.381 and Department Chair permission	M. G. Reardon Faize Jamil Glen Bousquet		
<b>Mechanical Engineering Technology</b>	23.262-031 Engineering Data Analysis (5/19-8/15)	<b>&gt; Online Course</b>		3	P: 92.126; requires MS Word and MS Excel or equivalent	Bradley Mingels		
CERTIFICATE IN COMPUTER ASSISTED MANUFACTURING (See page 4 for required courses.) CERTIFICATE IN MANUFACTURING TECHNOLOGY								
<b>Multimedia Applications</b>	(See courses listed under Information Technology.) CERTIFICATE IN MULTIMEDIA APPLICATIONS (See page 3 for required courses.)							
<b>Music</b>	71.102-011 Music Theory 2 71.104-011 Aural Skills 2 71.110-011 Basic Music Theory 71.201-011 Music Theory 3 71.203-011 Aural Skills 3 74.386-011 History of Rock Music 77.499-021 Music Business Internship (5/19-8/15) 78.493-021 Internship in Sound Recording Technology (5/19-8/15)	M-Th M-Th M-Th M-Th M-Th M-Th TBA TBA	8:00-10:00 am 10:15-11:35 am 10:15 am-12:15 pm 10:15 am-12:15 pm 8:00-9:20 am 10:15 am-12:15 pm TBA TBA	3 1 (2) 3 3 1 (2) 3 6 6	P: 71.101 P: 71.103 P: For non-Music majors only; AE P: 71.102 P: 71.104 AE P: Permission of Chair P: Permission of Chair	Lisa Cleveland Alan Williams Thomas Stumpf Lisa Cleveland Alan Williams Richard Strasser Richard Strasser William Moylan		
<b>Paralegal Studies (See also Criminal Justice and Legal Studies)</b>	41.363-011 Corporate and Property Law 41.376-011 Family Law 41.497-011 Paralegal Practicum	T/Th M/W TBA	7:00-10:00 pm 7:00-10:00 pm TBA	3 3 3	P: Minimum of three paralegal courses and permission of Prof. William Burke, Coordinator, Legal Studies; call (978) 934-2765		Eugene Reardon Russell Karl William Burke	
CERTIFICATE IN PARALEGAL STUDIES								
<b>Philosophy</b>	45.201-011 Introduction to Philosophy 45.201-031 Introduction to Philosophy (5/19-8/15) 45.202-011 Introduction to Logic 45.203-011 Introduction to Ethics	T/Th T/Th T/Th M/W	6:00-9:00 pm 7:00-10:00 pm 7:00-10:00 pm 7:00-10:00 pm	3 3 3 3	VC, AHE VC, AHE; requires proctored exams VC, AHE VC, AHDE	Donald LeBlanc Donald LeBlanc Joseph Shay Holly Parker		
CERTIFICATE IN CONTEMPORARY COMMUNICATIONS (See page 4 for required courses.)								
<b>Physics</b>	95.103-011 General Physics I 95.141-011 Physics I 95.144-011 Physics II 96.103-011 Experimental General Physics I (2 days/week) 96.141-011 Experimental Physics I (2 days/week) 96.144-011 Experimental Physics II (2 days/week) 99.101-011 Radiation and Life 99.102-011 Radiation and Life Lab	M-Th M-F M-F T/Th M/W T/Th M/W M/W	8:00-10:00 am 8:00-10:00 am 8:00-10:00 am 2:45-5:45 pm 2:45-5:45 pm 2:45-5:45 pm 6:00-9:00 pm 3:30-5:30 pm	3 3 (4) 3 (4) 1 (2) 1 (2) 1 (2) 3 1 (2)	C: 96.103; SL C: 92.131, 96.141; SL P: 95.141. C: 92.132, 96.144; SL C: 95.103 or 95.201; SL C: 95.141; SL P: 96.141. C: 95.144; SL C: 99.102; SL C: 99.101; SL	Arthur Mittler F. Raymond Hardy Roger McLeod Arthur Mittler F. Raymond Hardy Department Faculty Anthony Stevens Anthony Stevens		
<b>Plastics</b>	27.451-011 Selected Topics I 27.453-011 Selected Topics III	M/W T/Th	7:00-10:00 pm 7:00-10:00 pm	3 3	P: Coordinator permission P: Coordinator permission	Department Faculty Department Faculty		
Note: Courses with the 27 prefix are not eligible for graduate credit. CERTIFICATE IN PLASTICS ENGINEERING TECHNOLOGY								
<b>Political Science</b>	46.101-011 Introduction to American Politics 46.112-011 Introduction to Comparative Political Systems 46.121-011 Introduction to International Relations 46.230-011 Law and the Legal System 46.348-031 Literature, Politics and Genocide in Cambodia (5/19-8/15) 46.368-012 Middle East Politics	M/W M/W M-Th T/Th M-Th M-Th	7:00-10:00 pm 7:00-10:00 pm 12:30-2:30 pm 7:00-10:00 pm 7:00-10:00 pm 10:15 am-12:15 pm	3 3 3 3 3 3	BS BS BS BS BS BS	Francis Talty Tracy LaFauci Dean Bergeron P. Sullivan Talty George Chigas Dean Bergeron		
<b>Psychology</b>	47.101-011 General Psychology 47.101-031 General Psychology (5/19-8/15) 47.209-011 Social Psychology 47.232-031 Psychology of Personality (5/19-8/15) 47.260-011 Human Development I 47.272-011 Abnormal Psychology 47.312-031 Learning and Behavior (5/19-8/15) 47.328-011 Dynamics of Interpersonal Relations 47.351-031 Human Sexuality (5/19-8/15) 47.361-011 Problem and Issues in Childhood and Adolescence 47.373-011 Brain, Mind and Behavior Seminar: Clinical Psychology 47.475-011 Seminar: Contemporary Trends-Addictions (5/19-8/15)	T/Th T/Th M/W M/W M/W T/Th T/Th M/W T/Th M-Th T/Th	7:00-10:00 pm 7:00-10:00 pm 7:00-10:00 pm 7:00-10:00 pm 6:00-9:00 pm 6:00-9:00 pm 7:00-10:00 pm 7:00-10:00 pm 7:00-10:00 pm 7:00-10:00 pm 2:45-5:45 pm	3 3 3 3 3 3 3 3 3 3 3 3	BS BS BSV BS; requires MS Word BS P: 47.101; BS P: 47.101; BS P: 47.101; BS P: 47.101; BS P: 47.101; BS P: 47.101; BS P: 47.101, 47.260 P: 47.101 P: 47.232 or 47.272 or instructor permission P: 47.101; other prerequisites may be specified by the instructor	Alexandria Weida M. Stanford-Pollock Kristen Pepe Joan Cannon Ann MacGibbon Gail Birkhead Charlotte Mandell Noel Cartwright Mary Duell Mary Duell Department Faculty Mary Duell Peter Hantzis Richard Siegel		
<b>Regional Economic and Social Development</b>	57.475-011 Community Conflict Resolution	T/Th	6:30-9:30 pm	3		David Turcotte		
<b>Sociology</b>	48.101-011 Introduction to Sociology 48.255-011 Social Deviance 48.260-011 Sociology of Mass Media 48.319-011 The Sixties 48.351-031 Sociology of Health and Health Care (5/19-8/15)	M/W T/Th M-Th T/Th M-Th	7:00-10:00 pm 7:00-10:00 pm 8:00-10:00 am 7:00-10:00 pm 7:00-10:00 pm	3 3 3 3 3	BS P: 48.101 P: 48.101; Human Values, BSV P: 48.101 P: 48.101	Levon Chorbajian Chris Cass Levon Chorbajian Jack Porter John Ost		
<b>Technical Writing</b>	42.403-021 Advanced Software Writing (5/19-8/15)	Tues	6:00-9:00 pm	3	P: 42.402	Stephen Murphy		
CERTIFICATE IN TECHNICAL WRITING Technical Writing courses are open to undergraduate and graduate students.								
<b>Water/Wastewater Option</b>	(See courses under Civil Engineering Technology: Water/Wastewater Option) CERTIFICATE IN WASTEWATER TREATMENT CERTIFICATE IN WATER TREATMENT							
<b>Website Design and Development</b>	(See courses under Art and Information Technology.) CERTIFICATE IN WEBSITE DESIGN AND DEVELOPMENT (See page 3 for required courses.)							

# July 7-August 15 Summer Session II

**Day Classes** begin on July 7 and meet Monday through Thursday for 3-credit courses and meet Monday through Friday for 4-credit courses.

**M/W Evening Classes** begin on July 7 and include 2 FRIDAYS: July 18 and August 1 at the regularly scheduled hours.

**T/Th Evening Classes** begin on July 8 and include 2 FRIDAYS: July 25 and August 8 at the regularly scheduled hours.

*Reminder: This course listing combines the University of Massachusetts Lowell day school courses and the continuing studies courses. It is important to check course numbers and prerequisites to ensure enrollment in the correct class.*

No.	Title	Eve	Time	Cr (Co)	P: Prerequisite C: Corequisite/Comments	Instructor
<b>Accounting</b>	60.202-021 Accounting/Managerial 60.331-021 Cost Management Systems	T/Th T/Th	6:00-9:00 pm 6:00-9:00 pm	3 3	P: 60.201 P: 60.202, BSBA students (non-Accounting majors) and College of Management Dean permission	Lisa Andrusaitis Jeffrey Mead
<b>CERTIFICATE IN ACCOUNTING</b>						
<b>Art/Computer Graphics</b>	70.379-021 Website Design: Dreamweaver/Windows 70.384-021 Advanced Website Design and Development/Windows	T/Th M/W	7:00-10:00 pm 7:00-10:00 pm	3 3	P: 90.238, and 90.231 or 70.262 P: 90.238 and 70.379	Chris Perry Jay Kamins
NOTE: While the above courses will not directly transfer into the Art Department's Bachelor of Fine Arts Day School degree program, certain two-course clusters may be accepted for transfer upon prior department approval. <b>CERTIFICATE IN GRAPHIC DESIGN AND DIGITAL IMAGING</b> (See page 3 for required courses.) <b>CERTIFICATE IN WEBSITE DESIGN AND DEVELOPMENT</b> (See page 3 for required courses.)						
<b>Art History</b>	58.494-021 Directed Studies 58.496-021 Practicum in Art History	TBA TBA	TBA TBA	3 3	P: Art History Coordinator permission P: Art History Coordinator permission	Liana Cheney Liana Cheney
<b>Chemistry</b>	84.112-021 General Chemistry II 84.114-021 General Chemistry II Lab 84.122-021 Chemistry II 84.124-021 Chemistry Lab II 84.222-021 Organic Chemistry II 84.222-022 Organic Chemistry II 84.230-021 Organic Chemistry Lab II A 84.230-022 Organic Chemistry Lab II A	M-Th M/W/Th M/W T/Th M/T/Th T/Th T/Th M/W	10:15 am-12:15 pm 2:45-5:45 pm 7:00-10:00 pm 7:00-10:00 pm 2:45-5:45 pm 7:00-10:00 pm 6:00-10:00 pm 6:00-9:00 pm	3 1 (3) 3 1 (3) 3 3 1 (4) 1 (4)	P: 84.111 or permission of instructor; C: 84.114; SL P: 84.113 or permission of instructor; C: 84.112; SL P: 84.121 and 84.123. C: 84.124; SL P: 84.123; C: 84.122; SL P: 84.221. C: 84.230; SL P: 84.221. C: 84.230; SL P: 84.229; C: 84.222; SL P: 84.229. C: 84.222; SL	Judith Goldsberry Athena Letsou Judith Goldsberry Paul Damour Gene Davis Gene Davis Judith Freeman Judith Freeman
<b>Cinema</b>	52.374-021 Classics of Italian Cinema 52.380-021 Italian Cinema: Directors and Themes	M-Th M-Th	10:15 am-12:15 pm 8:00-10:00 am	3 3	VCA VCA	Mario Aste Mario Aste
<b>Civil and Environmental Engineering</b>	14.205-021 Dynamics (alternate 22.213)	M/W	7:00-10:00 pm	3	P: 14.203, 92.132	Faize Jamil
<b>Civil Engineering Technology</b>	<b>CERTIFICATE IN ENVIRONMENTAL TECHNOLOGY</b> <b>CERTIFICATE IN HAZARDOUS WASTE MANAGEMENT</b> <b>CERTIFICATE IN LAND SURVEYING</b>					
<b>Civil Engineering Technology: Water/Wastewater Option</b>	15.132-021 Environmental Chemistry II CERTIFICATE IN WASTEWATER TREATMENT CERTIFICATE IN WATER TREATMENT	M/W	7:00-10:00 pm	3	P: 86.131; SL	Charles Panagiotakos
<b>Client/Server Technology</b>	(See courses listed under Information Technology) <b>CERTIFICATE IN CLIENT/SERVER DATABASE DESIGN AND ADMINISTRATION</b> (See page 4 for required courses.)					
<b>Computer Mathematics</b>	(See courses listed under Information Technology.)					
<b>Computer Science</b>	91.113-021 Exploring the Internet	M/W	6:00-9:00 pm	3	Non-CS Majors only	Peter Weston
<b>Criminal Justice (See also Legal Studies and Paralegal Studies)</b>	44.201-021 Computer Applications in Criminal Justice 44.221-021 Criminology 44.261-021 Juvenile Delinquency 44.390-021 Research Methods 44.496-021 Practicum CERTIFICATE IN COMMUNITY POLICING CERTIFICATE IN PARALEGAL STUDIES	M-Th T/Th M/W M/W TBA	10:15 am-12:15 pm 6:00-9:00 pm 6:00-9:00 pm 7:00-10:00 pm TBA	3 3 3 3 3	P: 44.101 or instructor permission P: Instructor permission	Department Faculty Claire Murphy Steven Sacco Kerry Curtis Allan Roscoe
<b>Economics</b>	49.201-021 Economics I (Microeconomics) 49.201-022 Economics I (Microeconomics) 49.202-021 Economics II (Macroeconomics) 49.211-021 Statistics I	M-Th T/Th M/W M/W	8:00-10:00 am 6:00-9:00 pm 7:00-10:00 pm 6:00-9:00 pm	3 3 3 3	P: 90.111; BS P: 90.111; BS P: 90.111; BS P: 92.122 or equivalent	Ronald Hemenway Ronald Olive Patricia Machado Harjeet Khosla
<b>Electrical and Computer Engineering</b>	16.312-021 Electronics II Lab 16.312-022 Electronics II Lab 16.360-021 Electromagnetic Theory I 16.362-021 Signals and Systems I 16.366-021 Electronics II 16.412-021 Directed Studies 16.491-021 Industrial Experience 16.492-021 Industrial Experience 16.493-021 Industrial Experience	M/W M/W T/Th T/Th T/Th TBA TBA TBA TBA	4:00-7:00 pm 7:00-10:00 pm 7:00-10:00 pm 2:00-5:00 pm 9:00 am-Noon TBA TBA TBA TBA	2 (3) 2 (3) 3 3 3 3 3 3 3	P: 16.311; C 16.366 P: 16.311; C 16.366 P: 16.202 92.236 P: 16.202 92.236 P: 16.365; C 16.312 P: Instructor permission P: Permission by Alan Rux P: Permission by Alan Rux P: Permission by Alan Rux	Alan Rux Alan Rux Brita Dean Mufeed Mah'd Mufeed Mah'd Ziyad Salameh Alan Rux Alan Rux Alan Rux
<b>Electronic Engineering Technology</b>	<b>CERTIFICATE IN COMPUTER ENGINEERING TECHNOLOGY</b> <b>CERTIFICATE IN ELECTRONICS TECHNOLOGY</b> <b>CERTIFICATE IN ELECTRO-OPTICS TECHNOLOGY</b>					
<b>English</b>	42.101-021 College Writing I 42.102-021* College Writing II 42.102-022* College Writing II 42.104-021* College Writing II for International Students 42.212-021 The Short Story 42.217-021 The Horror Story 42.224-021** Business Writing 42.232-021 Turning Fiction Into Film	M/W M-Th T/Th M/W M-Th T/Th T/Th M/W M-Th	7:00-10:00 pm 10:15 am-12:15 pm 7:00-10:00 pm 7:00-10:00 pm 8:00-10:00 am 7:00-10:00 pm 6:00-9:00 pm 10:15 am-12:15 pm	3 3 3 3 3 3 3 3	P: 42.101 P: 42.101 P: 42.103; English composition requirement P: 42.102; LT P: 42.102; LT P: 42.102 P: 42.102; LT	Mary Hojnacki Kim Komperda Stephen Lucas Rita Naughton Dina Bozicas Henry Venuti Jeffrey Evangelista Department Faculty

# ACADEMIC CREDIT COURSE LISTING

No.	Title	Eve	Time	Cr (Co)	P: Prerequisite C: Corequisite/Comments	Instructor
42.295-021	History of American Literature II	M/W	7:00-10:00 pm	3	P: 42.102; LT	Henry Venuti
42.304-021	Creative Writing: Screenwriting	M/W	7:00-10:00 pm	3	P: 42.102	Richard Farrell
*Students will not receive credit for both 42.102 and 42.104. **Students may not receive credit for both 42.224 and 42.226						
<b>CERTIFICATE IN TECHNICAL WRITING</b>						
<b>Graphic Design and Digital Imaging</b>	(See courses listed under Art and Information Technology.) <b>CERTIFICATE IN GRAPHIC DESIGN AND DIGITAL IMAGING</b> (See page 3 for required courses.)					
<b>Health Professions</b>	30.305-021 Exercise Physiology Lecture	M-F	8:00-10:00 am	4	P: Anatomy and Physiology, Chemistry; Sean Collins not open to UMass Lowell Exercise Physiology majors; SL	
	30.306-021 Introduction to Gerontology	M-Th	10:15 am-12:15 pm	3	BS	Judith Conahan
	30.307-021 Exercise Physiology Lab	M/W/Th	10:15 am-12:15 pm	3	P: Anatomy and Physiology, Chemistry; Sean Collins not open to UMass Lowell Exercise Physiology majors; SL	
	35.102-021 Human Anatomy and Physiology II	T/Th	6:15-9:15 pm	3	P: 35.101, 35.103 (or equivalent); C: 35.104; SL	Paul Fierimonte
	35.104-021 Human Anatomy & Physiology II Lab	T/W/Th	2:00-5:00 pm	1 (3)	P: 35.101, 35.103; C: 35.102; SL	Alease Bruce
<b>CERTIFICATE IN NUTRITION</b>						
<b>History (See also Art History)</b>	43.106-021 The Modern World	T/Th	6:00-9:00 pm	3	HS	Janet Rider
	43.112-021 U.S. History Since 1877	M/W	7:00-10:00 pm	3	HS	Diane Lewis
	43.216-021 American Environmental History	M-Th	8:00-10:00 am	3	HS	Chad Montrie
	43.314-021 U.S. Social History Since 1880	T/Th	7:00-10:00 pm	3	HS	Robert Lemire
	43.350-021 Colonial America: History and Culture	M/W	6:30-9:30 pm	3	HS	Harry Hubbard
<b>Information Technology</b>	78.201-021 Introduction to Audio for Multimedia and the Web — Featuring Sound Forge® 6.0/Windows	T/Th	7:00-10:00 pm	3	P: Intro to Multimedia or HTML	Alex Case recommended
	90.160-021 Introduction to Information Systems	T/Th	6:00-9:00 pm	3		Christopher Gambon
	90.202-021 Introduction to PCs & MS Office	M/W	6:00-9:00 pm	3		Edward Mowrey
	90.211-021* Introduction to Programming with C - Part I	M/W	7:00-10:00 pm	3	No previous prog. experience required	Helen Wang
	90.212-021* Introduction to Programming with C - Part II	T/Th	7:00-10:00 pm	3	P: 90.211	Fuquan Gao
	90.220-021 Visual Basic	T/Th	7:00-10:00 pm	3		Leo Javis
	90.267-021* C Programming	M/W	6:00-9:00 pm	3	P: Previous programming experience	Lee Clark
	90.267-022* C Programming	T/Th	6:00-9:00 pm	3	P: Previous programming experience	Nancy Kiernan
	90.267-023* C Programming	T/Th	7:00-10:00 pm	3	P: Previous programming experience	Joseph Russell
	90.268-021 C++ Programming	M/W	7:00-10:00 pm	3	P: 90.267 or 90.212	James Brzowski
	90.271-021 C# (C Sharp)	T/Th	7:00-10:00 pm	3	P: 90.268 or 90.301	James Brzowski
	90.291-021 Introduction to DHTML	M/W	6:30-9:30 pm	3		Chris Belknap
	90.297-021 Introduction to Java Programming	T/Th	6:00-9:00 pm	3	P: Previous prog. experience required	Peter Weston
	90.301-021 Java Programming/Windows	M/W	7:00-10:00 pm	3	P: 90.297 or 90.268	Elizabeth Carbone
	90.302-021 Javascript	M/W	6:00-9:00 pm	3	P: 90.291 or knowledge of DHTML	Dae Cho
	90.305-021 Introduction to Perl	M/W	7:00-10:00 pm	3	P: 90.267	Jonathan Worthley
	90.312-021 UNIX Shell Programming	M/W	7:00-10:00 pm	3	P: 90.311, and 90.267 or 90.212	Michael Richards
	90.313-021 UNIX Internals	M/W	7:00-10:00 pm	3	P: 90.312	Partha Mittra
	90.443-021 Fundamentals of Client/Server Computing	M/W	6:00-9:00 pm	3		Umesh Bhargava
	90.461-021 LAN/WAN	M/W	7:00-10:00 pm	3	P: 90.267 or previous prog. experience	Krishnajee Putcha
	90.462-021 TCP/IP and Network Architecture	T/Th	6:00-9:00 pm	3	P: 90.461	Arvind Kukreja
	90.463-021 Advanced Networking Technologies	M/W	7:00-10:00 pm	3	P: 90.461	S. Vijayarangam
	90.474-021 Relational Database Concepts	T/Th	6:00-9:00 pm	3	P: 90.267	Umesh Bhargava
*Students will not receive credit for both 90.267 and the 90.211/90.212 sequence.						
<b>CERTIFICATE IN CLIENT/SERVER DATABASE DESIGN AND ADMINISTRATION</b> (See page 4 for required courses.)						
<b>CERTIFICATE IN CONTEMPORARY COMMUNICATIONS</b> (See page 4 for required courses.)						
<b>CERTIFICATE IN DATA/TELECOMMUNICATIONS</b> (See page 4 for required courses.)						
<b>CERTIFICATE IN FUNDAMENTALS OF INFORMATION TECHNOLOGY</b> (See page 3 for required courses.)						
<b>CERTIFICATE IN INTRANET DEVELOPMENT</b> (See page 4 for required courses.)						
<b>CERTIFICATE IN MULTIMEDIA APPLICATIONS</b> (See page 3 for required courses.)						
<b>CERTIFICATE IN UNIX</b> (See page 4 for required courses.)						
<b>CERTIFICATE IN WEBSITE DESIGN AND DEVELOPMENT</b> (See page 3 for required courses.)						
<b>Languages</b>	52.374-021 Classics of Italian Cinema	M-Th	10:15 am-12:15 pm	3	VC	Mario Aste
	52.380-021 Italian Cinema: Directors and Themes	M-Th	8:00-10:00 am	3	VCA	Mario Aste
	54.102-021 Beginning Spanish II	M-Th	8:00-10:00 am	3	P: 54.101 or equivalent	J. Heli Hernandez
	54.102-022 Beginning Spanish II	M/W	7:00-10:00 pm	3	P: 54.101 or equivalent	Kimberly Vitchkoski
	54.212-021 Intermediate Conversational Spanish II	M-Th	10:15 am-12:15 pm	3	P: 54.211 or equivalent	J. Heli Hernandez
	54.212-022 Intermediate Conversational Spanish II	TBA	7:00-10:00 pm	3	P: 54.211 or equivalent	Department Faculty
<b>CERTIFICATE IN SPANISH</b>						
<b>Legal Studies (See also Criminal Justice and Paralegal Studies)</b>	41.370-021 Real Estate Law	M/W	7:00-10:00 pm	3		J. Alan Roberts
	41.376-021 Family Law	T/Th	7:00-10:00 pm	3		Ellen Curran
	41.381-021 Women and the Law	M/W	7:00-10:00 pm	3		Nancy Dick
	41.387-021 Legal Research Methods	T/Th	7:00-10:00 pm	3		Nancy Dick
<b>CERTIFICATE IN PARALEGAL STUDIES</b>						
<b>Management</b>	61.300-021 Investments	M/W	6:00-9:00 pm	3	P: COM Filter courses, Junior standing and College of Mgmt. Dean permission	Frank Andrews
	63.301-031 Management Information Systems (7/7-8/15)	► Online Course		3	P: BSBA students or Business Minor/BSIT/ASIT students with 54+ credits, COM Filter courses and College of Mgmt. Dean permission; requires proctored exams	David Lewis
<b>Mathematics</b>	90.111-021* Fundamentals of Algebra	M/W	7:00-10:00 pm	3		Eugene Welch, Jr.
	92.121-021** Precalculus Mathematics	M-Th	8:00-10:00 am	3	P: 90.111 or equivalent; MA	Alan Kaplan
	92.121-022** Precalculus Mathematics	M/W	6:30-9:30 pm	3	P: 90.111 or equivalent; MA	Candice Weston
	92.122-021 Management Calculus	M-Th	10:15 am-12:15 pm	3	P: 92.119 or 92.121 or equivalent; not for science or engineering majors; MA	Alexander Olsen
	92.123-021 Precalculus Mathematics II	T/Th	7:00-10:00 pm	3	P: 92.121; MA	Terence Watterson
	92.125-021 Calculus A	T/Th	7:00-10:00 pm	3	P: 92.123; MA	Department Faculty
	92.126-021 Calculus B	M/W	7:00-10:00 pm	3	P: 92.125; MA	Theresa Schille
	92.183-021 Introduction to Statistics	M-Th	8:00-10:00 am	3	P: 90.111 or equivalent; MA	Alexander Olsen
	92.183-022 Introduction to Statistics	M/W	7:00-10:00 pm	3	P: 90.111 or equivalent; MA	Alexander Olsen
	92.231-021 Calculus III	M-F	10:15 am-12:15 pm	4	P: 92.132; MA	Ronald Brent
	92.321-021 Discrete Structures I	M/W	6:00-9:00 pm	3	P: 90.112 or 92.121	Anthony Penta
	92.386-021 Statistics for Science and Engineering	M/W	6:00-9:00 pm	3	P: 92.225 or 92.132	Department Faculty
	92.427-021 Geometry	M/W	2:00-5:00 pm	3	P: 92.221 or 92.321; TI 92 required	Marvin Stick
	92.450-021 Mathematical Modeling	T/Th	6:00-9:00 pm	3	P: 92.234	James Graham-Eagle
<b>NEW!</b>	<b>92.486-021 Statistical Programming Using SAS</b>	T/Th	6:00-9:00 pm	3	<b>P: 92.386 or equivalent</b>	<b>Rebecca Gore</b>
*Fundamentals of Algebra (90.111) is a preparatory course and cannot be credited toward a degree program at the University of Massachusetts Lowell.						
**Students will not receive credit for both 90.112 and 92.121. For students in the Information Systems Program, 92.121 can be substituted for the combination of 90.112 and 90.119.						
University of Massachusetts Lowell day students must have approval from their Department Chairperson before taking courses with a 90 prefix. Many 500-level courses are well within the grasp of upper level undergraduates and may be used as electives. Contact the Graduate School for course listings and admissions procedures.						

# ACADEMIC CREDIT COURSE LISTING

No.	Title	Eve	Time	Cr (Co)	P: Prerequisite C: Corequisite/Comments	Instructor
Mechanical Engineering	22.213-021 Dynamics (alternate 14.205)	M/W	7:00-10:00 pm	3	P: 22.211	Faize Jamil
Mechanical Engineering Technology	CERTIFICATE IN COMPUTER ASSISTED MANUFACTURING (See page 5 for required courses.) CERTIFICATE IN MANUFACTURING TECHNOLOGY					
Multimedia Applications	(See courses listed under Information Technology.) CERTIFICATE IN MULTIMEDIA APPLICATIONS (See page 3 for required courses.)					
Music	71.110-021 Basic Music Theory 71.202-021 Music Theory 4 <b>NEW! 71.204-021</b> <b>NEW! 78.201-021</b> Aural Skills 4 Introduction to Audio for Multimedia and the Web — Featuring Sound Forge® 6.0/Windows 78.301-021 Music, Technology and Society	M-Th M-Th M-Th T/Th	8:00-10:00 am 10:15 am-12:15 pm 12:30-1:50 pm 7:00-10:00 pm	3 3 1 (2) 3	For Non-Music Majors only; AE P: 71.201 P: 71.203 P: Intro to Multimedia or HTML recommended	Lisa Cleveland Lisa Cleveland Alan Williams Alex Case Alan Williams
Paralegal Studies (See also Criminal Justice and Legal Studies)	41.370-021 Real Estate Law 41.387-021 Legal Research Methods CERTIFICATE IN PARALEGAL STUDIES	M/W T/Th	7:00-10:00 pm 7:00-10:00 pm	3 3		J. Alan Roberts Nancy Dick
Philosophy	45.201-022 Introduction to Philosophy 45.203-021 Introduction to Ethics CERTIFICATE IN CONTEMPORARY COMMUNICATIONS	M/W T/Th	7:00-10:00 pm 7:00-10:00 pm	3 3	VC VC	Joseph Shay Joseph Shay
Physics	95.104-021 General Physics II 95.141-021 Physics I 95.144-021 Physics II 96.104-021 Experimental General Physics II (2 days per week) 96.141-021 Experimental Physics I 96.144-021 Experimental Physics II (2 days per week) 99.101-021 Radiation and Life 99.102-021 Radiation and Life Lab	M-Th M-F M-F T/Th	8:00-10:00 am 10:15 am-12:15 pm 10:15 am-12:15 pm 2:45-5:45 pm	3 3 (4) 3 (4) 1 (2)	P: 95.103; C: 96.104; SL C: 92.131; 96.141; SL P: 95.141; C: 92.132, 96.144; SL P: 96.103; C: 95.104 or 95.202; SL C: 95.141; SL P: 96.141; C: 95.144; SL C: 99.102; SL P: or C: 99.101; SL	Department Faculty Edward Salesky Kunnat Sebastian Department Faculty Department Faculty Department Faculty Anthony Stevens Anthony Stevens
Plastics	27.452-021 Selected Topics II 27.454-021 Selected Topics IV NOTE: Courses with the 27 prefix are not eligible for graduate credit. CERTIFICATE IN PLASTICS ENGINEERING TECHNOLOGY	M/W T/Th	7:00-10:00 pm 7:00-10:00 pm	3 3	P: Coordinator permission P: Coordinator permission	Department Faculty Department Faculty
Political Science	46.110-021 Introduction to Politics	M/W	7:00-10:00 pm	3	BS	Department Faculty
Psychology	47.101-021 General Psychology 47.276-021 Theories of Learning 47.335-021 Psychology and Women	M/W M-Th T/Th	7:00-10:00 pm 10:15 am-12:15 pm 6:00-9:00 pm	3 3 3	BS P: 47.101; BS BSV	Department Faculty Sam Hantzis Department Faculty
Sociology	48.101-021 Introduction to Sociology <b>NEW! 48.276-021</b> 48.321-021 Social Theory I 48.340-021 Sociology of Sports	M-Th T/Th T/Th M/W	8:00-10:00 am 7:00-10:00 pm 7:00-10:00 pm 7:00-10:00 pm	3 3 3 3	BS P: 48.101 P: 48.101 P: 48.101 P: 48.101	Levon Chorbajian Chris Cass Jack Porter Levon Chorbajian
Technical Writing	Technical Writing courses are open to undergraduate and graduate students. CERTIFICATE IN TECHNICAL WRITING					
Water/Wastewater Option	(See courses under Civil Engineering Technology: Water/Wastewater Option.) CERTIFICATE IN WASTEWATER TREATMENT CERTIFICATE IN WATER TREATMENT					
Website Design and Development	(See courses under Art and Information Technology.) CERTIFICATE IN WEBSITE DESIGN AND DEVELOPMENT (See page 3 for required courses.)					

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## note:

Day students in the Class of 2004 and subsequent classes — Please visit our Website at <http://continuinged.uml.edu> to see if the course you are registering for fulfills the General Education 2000 Requirements.

**SATELLITE CENTER**  
**SUMMER 2003 COURSES**  
Held at Bedford, MA V.A. Medical Center

**NEW!**  
**Wireless Communications**  
T/Th: 6:00-9:00 pm  
Summer Session I: May 19–June 27  
Krishnajeet Putcha  
90.483-041  
3 credits

**NEW!**  
**Project Management Training Program\***  
T/Th: 6:00–10:00 pm  
Meets June 10, 12, 17, 19, 24, 26  
Bernie Cookson  
00.604-041  
Noncredit-2.4 CEUs awarded  
Price: \$695.00

**NEW!**  
**Security Management Seminar\***  
9:00 am–5:00 pm  
May 20 and 21  
Allan Roscoe  
00.401-041  
Noncredit – 1.5 CEUs awarded  
Price: \$775.00

\*For a detailed brochure on our noncredit Signature Seminars, please call (978) 934-2495.

## COMING SOON

### Security Guard Apprentice Program

UMass Lowell's Center for Security, Safety & Society is developing an innovative apprenticeship-training program for private security guards. This training program provides career-oriented security workers with professional training opportunities that will help them carve out a career as a Security Specialist. The program is also for private security companies who understand the need to develop a first class, skilled security workforce that can meet the challenges and new requirements of today's environment. Curriculum and program details will be announced in the next newsletter.

To learn more about the program, contact Jennifer Gaudet at the Center for Security, Safety & Society: 978-934-2747 or [Jennifer\\_Gaudet@uml.edu](mailto:Jennifer_Gaudet@uml.edu).

# GRADUATE COURSE LISTING

## Graduate Courses Summer Session I

Except as noted: Day classes begin on May 19.

M/W Evening Classes begin on May 19 and include 3 FRIDAYS: May 19, June 13, and June 27 at the regularly scheduled hours.

T/Th Evening Classes begin on May 20 and include 2 FRIDAYS: June 6 and June 20 at the regularly scheduled hours.

*Reminder: It is important to check course numbers and prerequisites to ensure enrollment in the correct class.*

No.	Title	Eve	Time	Cr (Co)	P: Prerequisite C: Corequisite/Comments	Instructor
Business Administration	60.501-031 Financial Accounting (5/19-7/11) (includes week of Fourth of July)	> Online Course		2	P: MBA Program or permission of MBA Director; req. proctored exams	Charles Feeney
	60.730-011 Federal Taxation (5/19-6/18)	M/W	6:00-10:00 pm	3	P: MBA Foundation Core or permission of MBA Director	Charles Feeney
	61.501-031 Business Finance (5/19-7/11) (includes week of Fourth of July)	> Online Course		2	P: 60.501; MBA Program or permission of MBA Director; requires proctored exams	Yash Puri
	61.691-031 International Finance (5/19-7/11) (includes week of Fourth of July)	> Online Course		3	P: MBA Foundation Core or permission of MBA Director	Yash Puri
	63.501-031 Operations Fundamentals (5/19-7/11) (includes week of Fourth of July)	> Online Course		2	P: MBA Program or permission of MBA Director; requires proctored exams	Riaz Khan
	63.601-031 Management Information Systems (5/19-7/11) (Includes week of Fourth of July)	> Online Course		3	P: MBA Foundation Core or permission of MBA Director; req. on-campus presentations and may require proctored exams	Luvai Motiwala
	63.651-011 Integrated Logistics–Supply Chain Management (5/19-6/27)	T/Th	6:00-9:00 pm	3	P: 64.601; MBA Foundation Core or permission of MBA Director	Joyce Mehring
	66.501-031 Organizational Behavior (5/19-7/11) (includes week of Fourth of July)	> Online Course		2	P: MBA Program or permission of MBA Director	Stuart Freedman
	66.725-011 Negotiations (5/19-6/18)	M/W	6:00-10:00 pm	3	P: MBA Foundation Core or perm. of MBA Director	Timm Kainen
Computer Science	91.515-021 Operating Systems (5/19-8/22)	TBA	TBA	3		Department Faculty
	91.540-021 Topics in Languages and Compilation (5/19-8/22)	TBA	TBA	3		Department Faculty
Criminal Justice	44.521-291 Criminological Theory (Held at Suffolk County Jail, Boston)	M/W	5:00-8:00 pm	3		Ronald Corbett
	44.526-031 Hate Crimes (5/19-8/15)	> Online Course		3		Allan Roscoe
	44.543-031 Forensic Psychology (5/19-8/15)	> Online Course		3		Alexandria Weida
	44.563-031 Substance Abuse and The Criminal Justice System (5/19-8/15)	> Online Course		3		David Orrick
	44.622-031 Family Violence (5/19-8/15)	> Online Course		3		Eve Buzawa
Education	44.624-011 Violence in America	T/Th	5:00-8:00 pm	3		James Byrne
	44.680-011 Special Topics: Institutional Corrections	T/Th	5:00-8:00 pm	3		Carol Higgins
	01.625-031 Organization of Schools and School Systems (5/19-8/15)	> Online Course		3		William Phelan
Electrical and Computer Engineering	04.636-031 Theory and Research in Curriculum (5/19-8/15)	> Online Course		3		Phyllis Gimbel
	05.623-031 School Law (5/19-8/15)	> Online Course		3		Patricia Anthony
	05.642-031 Principles of Supervision (5/19-8/15)	> Online Course		3		Robert Gower
	07.642-031 Program Evaluation (5/19-8/15)	> Online Course		3		B. Jochums-Slez
Health Professions	16.528-011 Alternate Energy Sources (5/19-6/27)	M/W	6:00-9:00 pm	3	P: Instructor permission	Ziyad Salameh
	16.529-011 Electric Vehicle Technology (5/19-6/27)	T/Th	6:00-9:00 pm	3	P: Instructor permission	Ziyad Salameh
	16.553-021* Software Engineering (5/19-7/22)	T/Th	6:00-8:00 pm	3	P: 16.216, 16.322	Marc Bumble
	16.558-011 World Wide Web Programming (5/19-6/27)	M/W	6:00-9:00 pm	3	P: Prog. skills and instructor permission	Dalila Megherbi
	16.574-021* Advanced Logic Design (5/19-7/22)	M/W	6:00-8:00 pm	3	P: 16.265	Anh Tran
	16.584-021* Probability and Random Processes (5/19-7/22)	T/Th	6:00-8:00 pm	3	P: 16.362	Lee Jones
*Note: The above asterisked courses are held from May 19-July 22. M/W courses begin May 19 with the final exam on July 21. T/Th courses begin May 20 with the final exam on July 22.						
Music Education	32.604-031 Health Data Analysis (5/19-8/15)	> Online Course		3	P: Elementary statistics; req. SPSS Student Version 11.0 for Windows	Beverly Volicer
	34.650-021 Clinical Education Experience I (5/19-7/11)	M-F	8:00 am-4:00 pm	3 (4)	P: First-year Physical Therapy grad. students only	Department Faculty
	34.652-021 Clinical Education Experience II (6/30-8/22)	M-F	8:00 am-4:00 pm	3 (4)	P: Clinical Education Experience I, second-year Physical Therapy grad. students only	Department Faculty
	34.701-011 Non-Credit Portfolio Assessment for Transitional Doctorate in Physical Therapy (tDPT)	Non-Credit Course				Department Faculty
NEW! Health Professions	34.702-031 Clinical Reasoning in Physical Therapy (5/19-8/15)	> Online Course		3	P: Admittance into tDPT; req. MS Word	Constance Seymour
	34.704-031 Healthcare Issues: Impact on Clinical Practice (5/19-8/15)	> Online Course		3	P: Admittance into tDPT; req. MS Word	Gerard Dybel
	36.613-031 Infectious Disease (5/19-8/15)	> Online Course		3	P: One semester of General Microbiology	S. Fessia-Richardson
Mathematics	92.500-011 Discrete Structures	T/Th	3:15-6:15 pm	3		Alan Doerr
	92.509-011* Probability, Statistics and Random Processes (5/19-7/22)	T/Th	6:00-8:00 pm	3	P: Calculus and Linear Systems or Linear Algebra	Lee Jones
	92.521-011 Algebraic Structures	M/W	6:00-9:00 pm	3	P: Linear Algebra or Discrete	Kenneth Levasseur
	92.535-011 History of Mathematics	T/Th	6:00-9:00 pm	3	P: Calculus	Joyce Williams
	92.590-021 Statistical Quality Control (5/19-8/15)	Wed	6:00-9:00 pm	3	P: 92.386 or permission of instructor	Shelley Rasmussen
*Note: The above asterisked course is held from May 19-July 21, with the final exam on July 21.						
Music Education	73.510-021 Foundations of Music Education (5/19-8/15)	Tues	5:00-8:00 pm	3		Donna Nagle
For additional Summer Music Graduate Education courses, please see Summer Session II.						
Psychology	47.511-011 Helping Skills I	M/W	6:00-9:00 pm	3	P: Open to senior students with instructor permission	Jerry Schwartz
	47.533-011 Mental Health Problems in the Community	T/Th	6:00-9:00 pm	3	P: Open to senior students with instructor permission	Peter Hantzis
	47.536-031 Forensic Psychology (5/19-8/15)	> Online Course		3		Alexandria Weida
Regional Economic and Social Development	57.512-011 Community Conflict Resolution	T/Th	6:30-9:30 pm	3		David Turcotte
Work Environment	19.559-011 Conflict Resolution	T/Th	6:30-9:30 pm	3		David Turcotte

## Graduate Courses Summer Session II

Except as noted: Day classes begin on July 7.

M/W Evening Classes begin on July 7 and include 2 FRIDAYS: July 18 and August 1 at the regularly scheduled hours.

T/Th Evening Classes begin on July 8 and include 2 FRIDAYS: July 25 and August 8 at the regularly scheduled hours.

<i>Reminder: It is important to check course numbers and prerequisites to ensure enrollment in the correct class.</i>						
No.	Title	Eve	Time	Cr (Co)	P: Prerequisite C: Corequisite/Comments	Instructor
Business Administration	61.610-021 Financial Markets and Monetary Policy	T/Th	6:00-9:00 pm	3	P: MBA Foundation Core or permission of MBA Director	Michael Carter
	62.601-031 Analysis of Customers and Markets (7/7-8/22)	> Online Course		3	P: MBA Foundation Core or permission of MBA Director	Eunsang Yoon
	63.688-031 Managerial Quality Control (7/7-8/15)	> Online Course		3	MBA Foundation Core or permission of MBA Dir.	David Lewis
Electrical and Computer Engineering	16.607-021 Electromagnetic Complex Variables	M/W	6:00-9:00 pm	3		Dikshitulu Kalluri
	16.668-021 Advanced Cryptography	M/W	6:00-9:00 pm	3	P: 16.658	Adam Elbirt
Health Professions	34.652-021 Clinical Education Experience II (6/30-8/22)	M-F	8:00 am-4:00 pm	3 (4)	P: Clinical Education Experience I, second-year Physical Therapy graduate students only	Department Faculty
Mathematics	92.527-021 Geometry	M/W	2:00-5:00 pm	3	Course is generally applicable only to the Teacher Option	Marvin Stick
	92.550-021 Mathematical Modeling	T/Th	6:00-9:00 pm	3		James Graham-Eagle
	92.576-021 Statistical Programming Using SAS	T/Th	6:00-9:00 pm	3	P: 92.386 or equivalent	Rebecca Gore
Music Education	73.578-021 Music As A Way of Knowing (7/28-8/1)	M-F	9:00 am-4:00 pm	3		Nick Page
	73.576-021 Finale Workshop (7/31-8/1)	Th/F	9:00 am-4:00 pm	1		Dan Lutz
	73.577-021 Instrumental Music Workshop (8/7-8/8)	Th/F	9:00 am-4:00 pm	1		Debra-Nicole Huber
	73.579-021 World Percussion Ensemble (8/11-8/13)	M/T/W	9:00 am-4:00 pm	1		Dan Foote
NEW! 73.580-021 Orff Master Class (8/11-8/15)	M-F	8:00 am-4:00 pm	3		R. DeBrot/D. Nagle	
	NEW! 73.581-021 The Opera Connection (7/21-7/22)	M/T	9:00 am-4:00 pm	1		Mark Caruso
	NEW! 73.582-021 Making Music Videos: An Engaging Assessment Tool (8/23-8/25)	W/Th/F	8:00 am-5:00 pm	2		Gena Greher
Psychology	47.508-021 The Child in the Community	T/Th	6:00-9:00 pm	3	P: Open to senior students with instructor permission	Doreen Arcus
Regional Economic and Social Development	57.535-021 Community-Based Planning	M/W	6:00-9:00 pm	3		Brenda Bond

# General Information

## Office Hours

Advising Center, Southwick Hall 225  
Monday-Friday: 8:30 am-5:00 pm

Enrollment Services/Continuing Studies Corporate and Distance Education, Southwick Hall 223  
Monday-Thursday: 8:30 am-8:30 pm  
Friday: 8:30 am-5:00 pm

## Holiday Hours and Special Hours

May 26: Memorial Day (University closed)

June 1: Commencement

July 4: Independence Day (University closed)

The week of June 30 through July 6 (closed July 4), the Office of Enrollment Services/Continuing Studies will be open from 8:30 am-5:00 pm.

The weeks of August 18 through August 29, the Office of Enrollment Services/Continuing Studies will be open from 8:30 am-7:00 pm.

## Phone Directory

Bookstore — North Campus .....	(978) 934-2623
Bookstore — South Campus.....	(978) 934-6908
Continuing Studies Main Number.....	(978) 934-2480
Continuing Studies Fax Number .....	(978) 934-3087
Continuing Studies Advising Center .....	(978) 934-2474
Continuing Studies Enrollment Services.....	(978) 934-2480
Graduate School .....	(978) 934-2380
	(800) 656-GRAD
College of Education.....	(978) 934-4600
Library — North Campus (Alumni/Lydon).....	(978) 934-3205
Library — South Campus (O'Leary) .....	(978) 934-4550
Phone-In Registration — Operator-Assisted.....	(978) 934-2700
Phone-In Registration — Automated.....	(978) 934-2050
UMass Lowell Main Number .....	(978) 934-4000
UMass Lowell Directions .....	(978) 934-5800
UMass Online Directions.....	www.uml.edu/maps
Weather Cancellations.....	(978) 934-2121

See our Website at  
<http://continuing.uml.edu>

You can also visit the Graduate School Website  
at [www.uml.edu/grad/off\\_campus](http://www.uml.edu/grad/off_campus)

# Registration Information

See Academic Calendars on page 18 for appropriate registration deadlines.

## Mail-In Registration

- Fill out the registration form and return it post-marked no later than the scheduled deadline.
- Mail to: University of Massachusetts Lowell Enrollment Services/Continuing Studies, Corporate and Distance Education One University Avenue Lowell, MA 01854-2881
- Payment must be made with the registration form, either by check, money order, VISA, MasterCard, or Discover. Make checks payable to: University of Massachusetts Lowell.
- Students will receive class confirmation, room assignment, receipt and ID by mail before the first class meeting.
- If your class has not been assigned a classroom when you register, please visit our Website at <http://continuing.uml.edu> and click on "NEW! View your schedule and classrooms."

## REGISTER EARLY

Get a head start and register early! Although we cannot guarantee an opening in any class, your chances for being enrolled in the course of your choice are better when you register early. Please note that seats in laboratory courses are limited.

## Fax-In Registration

Fill out the registration form and fax it to (978) 934-3087 no later than the scheduled deadline. Be sure to include your VISA, MasterCard, or Discover number.

## Phone-In Registration with an Operator

- Payment can be made by VISA, MasterCard, or Discover only.
- Call (978) 934-2700. Please refer to the Office of Enrollment Services/Continuing Studies hours for phone-in registration times. The registration staff may take only registration information. If you have any questions concerning courses and academic programs, please call (978) 934-2480 or (978) 934-2474 or see our website at [continuing.uml.edu](http://continuing.uml.edu).

## Automated Phone-In Registration Using the Voice Response System (Credit Courses Only)

Students who are presently enrolled at the University of Massachusetts Lowell, Continuing Studies, Corporate and Distance Education and who have a Continuing Studies PIN# (students registered during Fall and Spring), may now register for summer classes through the touchtone telephone registration system. This system is available during the following times: Monday-Thursday: 6:00 am-11:00 pm; Friday: 6:00 am-9:00 pm. **Note: Students will not receive a written receipt when registering using the Voice Response System.**

### To Access the System, Dial (978) 934-2049 or (978) 934-2050.

The Voice Response System will answer the call and ask if you want to access Day School (Option 1) or Evening Division (Option 3). Choose Option 3. You will now be asked for your ID # and, if valid, your Continuing Studies PIN#.

Hold flags will be checked and, if none are found, you will be led through the Registration/Add/Drop process by a series of menus and options.

When you finish selecting your courses, you will be asked to pay by credit card and informed of the amount owed. Registration will be completed upon payment.

If you hang up anytime during the call or do not complete the payment process, all of the ADD transactions will be undone.

If you experience any problems with this system, please report them to Enrollment Services at (978) 934-2588.

## Walk-In Registration at the Office of Enrollment Services/Continuing Studies, Southwick Hall, Room 223, North Campus

Please refer to the Office of Enrollment Services/Continuing Studies hours for walk-in registration. Payment must be made at the time of registration. Payment after 4:00 pm must be made by check, money order, VISA, MasterCard, or Discover. Students will receive class confirmation, room assignment, receipt, and ID at the time they register.

## General Registration and Open House: Tuesday, May 13 5:00-7:30 pm

We will be holding a special Open House on May 13 from 5:00-7:30 pm in Southwick Hall/Enrollment Services. Program Coordinators and Advisors will be present to answer your questions. Registration will be available. For further information, please call the Advising Center at (978) 934-2474.

## Late Registration — See page 18 for late registration dates

Note: There is an additional \$50.00 fee for late registration. No exceptions.

## Final Drop/Add Period

See the academic calendar for appropriate drop/add dates. Drop/adds can be processed in the Office of Enrollment Services/Continuing Studies, Southwick Hall, North Campus, Southwick Hall 223.

## Last Week to Withdraw with "W" Notation

See the appropriate academic calendar for the last day to withdraw. Students withdrawing from any class must officially notify the Office of Enrollment Services in writing, in person, by fax (978-934-3087) or by mail postmarked no later than the scheduled deadline. Verbal messages to faculty or staff do not constitute official notification.

## Identification Card

Students registering in person will receive an ID card during the office walk-in registration and general registration. Students who register by phone or mail will receive their ID by return mail with their letter of confirmation and receipt.

## Institutional Disclosure

Institutional Disclosure of Information according to the Higher Education Act is available at [www.uml.edu/student-services](http://www.uml.edu/student-services).

## Students with Disabilities

A student with a disability who needs special arrangements should contact Kerry Donohoe at the Advising Center at (978) 934-2465 early in the registration process. Special advising, registration assistance, preferential scheduling, and alternative examination procedures are available. Students must qualify for handicapped parking stickers. Special parking is also available on a temporary basis.

## The University's Annual Campus Crime and Safety Report

The University's Annual Campus Crime and Safety Report, which includes campus crime statistics and information about campus alcohol, drug and sexual assault policies as well as other important matters, is available on the Web at <http://www.uml.edu/police>. Paper copies of this report are available upon request at University Police (Ball Hall — 978-934-2384) and at the Office of Student Services (Cumnock Hall — 978-934-2100).

## Correct Social Security Number/Tax Identification Number

The University of Massachusetts Lowell must obtain your correct social security number (SSN) to file certain information returns with the IRS as well as to furnish a statement to you. The returns the University must file contain information about qualified tuition and related expenses (Form 1098-T, Tuition Payments Statement). The information about your tuition will help to determine whether you, or the person who can claim you as a dependent, may take the Hope credit or Lifetime Learning credit to reduce the federal income tax.

## Bookstore Locations

North Campus — Falmouth First Floor, (978) 934-2623  
South Campus — South Campus Dining Hall, (978) 934-6908

Please call the Bookstore to confirm the location of your textbook.

# Financial Information

Tuition is priced on the listed credit hour unless the contact hour is different. Tuition is then based on the listed contact hour.

## Tuition and Fee Information

	Per Credit/ Contact Hr.
Undergraduate Tuition	\$215.00
Undergraduate Audit	\$215.00
Undergraduate High Tech and Specialized Courses (Undergraduate courses offered on campus listed under Computer Science, Information Technology and Art/Graphics)	\$220.00
Undergraduate High Tech and Specialized Courses Audit	\$220.00
Undergraduate Off-Campus Courses/Audit*	\$235.00
Undergraduate Online Courses	\$260.00
Undergraduate Online Courses Audit	\$260.00
Graduate Tuition and Audit	\$375.00
Graduate Online Professional Courses and Audit (Engineering, Management and Science)	\$400.00
Graduate School of Education and Clinical Pathology Online Courses and Audit	\$375.00
Graduate Off-Campus Courses and Audit*	\$400.00
Late Registration Fee (non-refundable)	\$50.00

\*Note: Some tuitions may vary depending on customization and customer and program requirements.

Students who have checks returned due to insufficient funds will be charged an additional \$30.00 for the processing of the registration.

## Overdue Accounts

Students will be permitted to attend class and to utilize facilities only after they have cleared all their financial obligations to the University. In addition, student transcripts and diplomas will not be released until all debts have been paid. Should it be necessary to utilize the services of a collection agency or attorney for an overdue student account, the student will be liable for any and all legal fees, commissions, and associated service charges.

# REGISTRATION INFORMATION

## Directed Studies

Directed Studies and Practicums are considered Special Programs, and as such, tuition remission and certificates of eligibility cannot be accepted.

### NOTE:

#### Veterans' Information

Veterans must be matriculated in an undergraduate degree program and have all appropriate paperwork on file in the Office of Enrollment Services/Continuing Studies, including a DD214, an Admission Application form, and official transcripts from other colleges in order to receive VA benefits. Waivers for legal Massachusetts residents (residency must be documented) cover 100% cost of tuition, are not retroactive and do not cover registration and other fees. Veterans requesting benefits must check the appropriate line on the registration form. Veterans should use the mail-in or walk-in options when registering and should provide all necessary documentation (no phone-in). For additional information, please see our Website at <http://continuinged.uml.edu> or call Linda Morabito at (978) 934-2461.

Veterans' waivers are available for on-campus courses provided there is a sufficient number of tuition-paying students enrolled to bear the cost of instruction and provided there is space available. There are no waivers available for distance learning and off-campus courses. Merit and Need-Based Assistance Grants for online courses may be available to veterans who are presently enrolled in degree and certificate programs and who are making satisfactory academic progress towards their degrees or certificates.

#### International Students

International students registering for classes must hold an F1 Visa and provide proof of Visa status upon registration. Please call (978) 934-2588 if you have any questions.

#### Third-Party Payment

All students using company direct payment, military plans, state tuition waivers, or veterans' waivers must include the appropriate forms or authorizing letters with their registration, or have them on file. No tuition refund is awarded for late submission of eligibility form. Students receiving company reimbursement must prepay their own tuition. For additional information, call (978) 934-2479.

### NOTE:

#### Senior Citizens

Senior citizens (60 years or older) who are Massachusetts residents may attend classes in Continuing Studies credit programs tuition-free provided that there is a sufficient number of tuition-paying students enrolled to bear the cost of instruction and provided there is space available. Please note that waivers are not retroactive and do not cover fees. Proof of Massachusetts residency and birth date must be provided annually at the time of registration. There are no waivers available for distance learning and off-campus courses. Merit and Assistance Grants are available for veterans and seniors taking online courses who are presently enrolled in Degree and Certificate Programs and are making satisfactory academic progress towards their degrees or certificates.

#### Tuition Refund Policy for Credit Courses

Any eligibility for tuition refund is based on the academic calendar, not class attendance, and is pro-rated as follows, excluding fees:

<b>Summer I and Courses spanning Summer I and II</b>	
Withdrawal on or before May 9	100%
Withdrawal from May 10 to before the first class meeting	90%
Before the second class meeting	80%
Before the third class meeting	40%
After third class meeting	No refund

#### Summer II

<b>Summer II</b>	
Withdrawal on or before June 27	100%
Withdrawal from June 28 to before the first class meeting	90%
Before the second class meeting	80%
Before the third class meeting	40%
After third class meeting	No refund

#### Tuition Refund Policy for Online Courses (Graduate and Undergraduate)

Withdrawal on or before May 9	100%
Withdrawal from May 10 to May 16	90%
Withdrawal from May 17 to May 23	80%
Withdrawal from May 24 to May 27	40%
Withdrawal after May 27	No refund

Fees will be refunded if Continuing Studies is responsible for cancellations. The refund process normally requires at least a period of four to six weeks from the beginning of the semester.

Students withdrawing from any class must officially notify the Office of Enrollment Services/Continuing Studies on forms provided by the Office. Verbal messages to faculty or staff do not constitute official notification.

#### Tuition Refund Policy for Students Receiving Title IV Financial Aid and Who Are Enrolled in a Degree or Specifically Designated Certificate Program

Refunds for Title IV financial aid recipients will be processed according to Federal guidelines and institutional policy. Please call the Financial Aid Office at (978) 934-4220 if you have any questions.

#### Student Health Insurance (Graduate and Undergraduate)

Every student who is enrolled in at least 9 semester hours or more in a degree program is required by Massachusetts state legislation to participate in a qualifying student health insurance program. The cost of this insurance is \$426 from January 1 until August 14. Payment of the appropriate fee will be required at registration. To waive participation in this program, students must fill out a form at

registration showing equivalent coverage. The name of your insurance company and your policy number are required information on the waiver form.

#### NEW! International Students

All International students are required to be enrolled in the University Student Health Insurance Plan. This requirement is authorized under the insurance laws for higher education students in Massachusetts (Section 275 of Chapter 151 of the Acts of 1996). The only exception to this requirement will be for International students covered through an embassy plan. Students so insured will be permitted to waive the school plan, providing they submit official documentation that confirms they have such coverage and that this coverage meets the state requirements. Documentation of student status must be provided. Please call Maureen Secchiaroli at 978-934-2489.

#### Financial Aid

For information regarding Financial Aid, please contact Thu-Ha Pham in the Financial Aid Office at 978-934-4222.

# Academic Calendar & Registration Information

## May 19–June 27 Summer Session I

Day classes begin on Monday, May 19.

M/W Evening classes begin on Monday, May 19 and include 3 FRIDAYS: May 30, June 13, and June 27 at the regularly scheduled hours.

T/Th Evening classes begin on Tuesday, May 20 and include 2 FRIDAYS: June 6 and June 20 at the regularly scheduled hours.

Online classes begin Monday, May 19.

We encourage you to mail-in, phone-in, or fax your registration.

#### May 26: Memorial Day observed

Mail-In Registration: April 7 to May 14  
Phone-In Registration: April 7 to May 14  
Fax-In Registration: April 7 to May 14  
Walk-In Registration: April 7 to May 14

#### General Registration and Open House: Tuesday, May 13

Late Registration: Begins Thursday, May 15  
There is an additional \$50.00 fee for late registration.

#### Last Day to Add a Lab

Day Classes: May 20

#### Last Day for Partial Refund

(Before the 3rd class meeting)  
Day Classes: May 21  
M/W Evening Classes: May 28  
T/Th Evening Classes: May 27  
Online Classes: Through May 27

#### Last Day to Add Course

Day Classes: May 21 without permission;  
May 22 with instructor permission  
M/W Evening Classes: May 21 without permission;  
May 28 with instructor permission  
T/Th Evening Classes: May 22 without permission;  
May 27 with permission  
Online Classes: Through May 27

#### Last Day to Drop Course

Day Classes: May 22  
M/W Evening Classes: May 28  
T/Th Evening Classes: May 27  
Online Classes: Through May 27

#### Last Day to Withdraw with "W" Notation

Day Classes: June 5 for 3-credit courses,  
June 6 for 4-credit courses  
M/W Evening Classes: June 16  
(Before the 10th class meeting)

T/Th Evening Classes: June 17  
(Before the 10th class meeting)  
Online Classes: Through July 11

#### Final Examinations

Day Classes: June 25 for 3-credit courses,  
June 26 for 4-credit courses  
M/W Evening Classes: Friday, June 27  
T/Th Evening Classes: Thursday, June 26

**NOTE: M/W evening courses meet twice a week plus 3 Fridays: May 30, June 13, and June 27. T/Th evening courses meet twice a week plus 2 Fridays: June 6 and June 20.**

## July 7–August 15 Summer Session II

Day Classes begin on July 7.

M/W Evening classes begin on July 7 and include 2 FRIDAYS: July 18 and August 1 at the regularly scheduled hours.

T/Th Evening classes begin on July 8 and include 2 FRIDAYS: July 25 and August 8 at the regularly scheduled hours.

We encourage you to mail-in, phone-in, or fax your registration to guarantee the class of your choice and the receipt of your classroom confirmation.

#### July 4: Independence Day observed

Mail-In Registration: April 7 to July 1  
Phone-In Registration: April 7 to July 1  
Fax-In Registration: April 7 to July 1  
Walk-In Registration: April 7 to July 1

#### Late Registration: Begins July 2

There is an additional non-refundable \$50.00 fee for late registration.

#### Last Day to Add a Lab

Day Classes: July 8

#### Last Day for Partial Refund

(Before the 3rd class meeting)  
Day Classes: July 9  
M/W Evening Classes: July 14  
T/Th Evening Classes: July 15

#### Last Day to Add Course

Day Classes: July 9 without permission;  
July 10 with instructor permission  
M/W Evening Classes: July 9 without permission;  
July 14 with instructor permission  
T/Th Evening Classes: July 10 without permission;  
July 15 with permission

#### Last Day to Drop Course

Day Classes: July 10  
M/W Evening Classes: July 14  
T/Th Evening Classes: July 15

#### Last Day to Withdraw with "W" Notation

Day Classes: July 30 for 3-credit courses,  
July 24 for 4-credit courses  
M/W Evening Classes: August 1  
(Before the 10th class meeting)  
T/Th Evening Classes: August 5  
(Before the 10th class meeting)  
Online Classes: Through July 11

#### Final Examinations

Day Classes: August 12 for 3-credit courses,  
August 13 for 4-credit courses  
M/W Evening Classes: Wednesday, August 13  
T/Th Evening Classes: Thursday, August 14

**Note: M/W evening courses meet twice a week plus 2 Fridays: July 18 and August 1. T/Th evening courses meet twice a week plus 2 Fridays: July 25 and August 8.**

# Academic Information

The University of Massachusetts Lowell is accredited by the New England Association of Schools and Colleges, which accredits schools and colleges in the six New England states. Membership in the Association indicates that the institution has been evaluated carefully and meets the standards agreed upon by qualified educators. The programs in Civil Engineering Technology, Electronic Engineering Technology, and Mechanical Engineering Technology are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology. The Bachelor of Science in Business Administration (BSBA) is accredited by the AACSB — The International Association for Management Education.

## Catalog

Students should refer to the Continuing Studies, Corporate and Distance Education catalog for rules, regulations, program outlines, and course descriptions. The catalog is available in the Advising Center and the Office of Enrollment Services/Continuing Studies and at <http://continuing.uml.edu>.

## Admission into a Certificate or Degree Program

Students who have graduated from high school or who have earned a high school equivalency certificate are invited to apply for programs leading to a Certificate or an Associate's or Bachelor's degree. Applications for all programs are accepted on a rolling admissions basis. Contact the Continuing Studies, Corporate and Distance Education/Advising Center at (978) 934-2474 (certificate and degree programs) for an application and information on the application procedure. There is no fee to apply.

For a listing of our degree and certificate programs, please see page 5.

A student enrolled in any of our degree or certificate programs should schedule an appointment with the appropriate program advisor to help plan a schedule for degree or certificate completion.

## Admission into a Graduate Certificate or Degree Program

Students interested in applying into Graduate degree or certificate programs should contact the Graduate School at (800) 656-GRAD or [www.uml.edu/grad](http://www.uml.edu/grad). Students with Bachelor's degrees from accredited institutions are eligible to enroll as non-degree students for a total of 12 credits prior to matriculating into formal Graduate degree programs. Students must formally apply to Graduate certificate programs before enrolling in Graduate courses intended for specific certificate programs.

## Undergraduate Degree Completion

Students who expect to complete their degree requirements in the 2002-2003 academic year must arrange for a graduation interview at the Advising Center (978-934-2474). Students who anticipate graduating at the end of the Spring semester must complete the interview process by March 28. Students who anticipate graduating at the end of the Summer sessions must complete the interview process by June 27. A fee of \$75.00 is required of graduating students. Commencement will be held on June 1, 2003.

## Undergraduate Certificate Completion

When a student completes the necessary courses for a certificate program, the student should complete and submit a Certificate Award Petition to Continuing Studies/ Advising Center.

## Course Grades

Grade reports for the Summer sessions will be mailed to students approximately two weeks after exams end. Students who have received their PIN# can also call the Voice Response System at (978) 934-2049 or (978) 934-2050 to receive their Summer grades, which will be available as soon as they are posted.

# Advising Information

Advising Center Students are welcome to drop by the Advising Center, located in Southwick Hall, Room 225, from 8:30 am to 5:00 pm for general advising, information on Associate's and Bachelor's degrees and certificate programs, and/or to obtain catalogs and brochures. Call (978) 934-2474 for information or email at [Continuing\\_Education@uml.edu](mailto:Continuing_Education@uml.edu). For questions on Graduate programs, call the Graduate School at (978) 934-2380 or (800) 656-GRAD or see the website at [www.uml.edu/grad](http://www.uml.edu/grad).

## Appointments with Program Coordinators and General Advisors

In addition to the general advising conducted at the Advising Center, appointments with General Advisors and Program Coordinators also can be scheduled. Evening supervisors are also available in Enrollment Services, Southwick Hall, Room 223, from 5:00-8:00 pm to answer questions and conduct status reviews. Students are encouraged to call the Advising Center at (978) 934-2474 to schedule an appointment.

## Evening Supervisors

Professor Alan Doerr  
Professor Bernard Shapiro

## Faculty Advisors

Accounting and Management: Charles Thompson, Associate Professor

Applied Mathematics: Alan Doerr, Professor  
Biology, Chemistry, Environmental Science, Physics: Paul Damour, Associate Professor

Civil Engineering Technology: Mark Laquidara, Assistant Professor

Computer Mathematics, Information Technology: Ann Marie Hurley, Professor

Criminal Justice Liberal Arts, Paralegal Studies:

Joseph Lipchitz, Professor

Electronic Engineering Technology:

Fahd Wakim, Professor

Electronic Engineering Technology:

Amanda Davis, Assistant Professor

Mechanical Engineering Technology:

Robert Tuholski, Professor, Department Head

Mechanical Engineering Technology:

Glenn Sundberg, Assistant Professor

Plastics Engineering Technology and Plastics

Engineering Technology with Packaging Option:

Stephen Driscoll, Professor

## General Advisors

Ms. Joyce Brill: Information Technology

Ms. Kerry Donohoe: Degree and Certificate Programs

Ms. Claire Murphy: Bachelor of Liberal Arts, Criminal Justice

Ms. Susan Wartman: Degree and Certificate Programs

Ms. Brenda Woonton: Degree and Certificate Programs

## We are no longer accepting applications for the following degree and certificate programs:

### Associate's Degrees:

- Accounting
- Applied Chemistry
- Applied Mathematics
- Applied Mathematics: Computer Mathematics Option
- Banking
- Criminal Justice

### Bachelor's Degrees

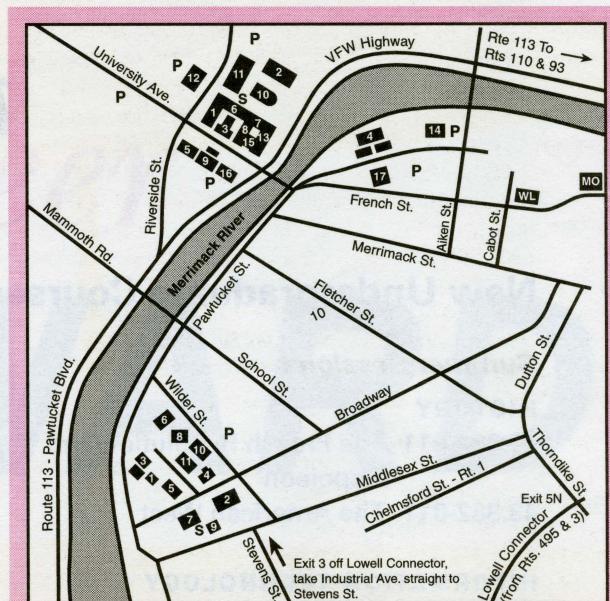
- Applied Chemistry

### Certificate Programs:

- Banking
- Engineering Skills
- International Trade
- Internet System Administration
- Novell Option of Data Telecommunications
- Purchasing
- Quality Assurance
- Security Management
- Windows Programming

A student enrolled in any of these programs should schedule an appointment with the appropriate program advisor to help plan a schedule for degree or certificate completion.

# Campus Information



North	South
1 BL Ball Engineering Ctr.	1 Allen Hall
2 Costello Gym	2 CO Coburn
3 Cumnonk Hall	3 Concordia Hall
4 Dormitories	4 Dining Hall
5 Eames Hall	5 DU Dugan Hall
6 EB Engineering	6 DR Durgin Hall
7 FA Falmouth	7 MA Mahoney Hall
8 KI Kitson	8 OL O'Leary Library
9 LL Alumni/Lydon Library	9 Power Plant
10 EC Pinanski	10 SU Student Union
11 OH Olney	11 WE Weed Hall
12 OS Olsen	P Parking
13 PA Pasteur	S Security
14 Research Foundation	Downtown
15 SO Southwick Hall	MO Mogan Center
16 Smith Hall	WL Wannalancit
17 Fox Student Union	
P Parking	
S Security	

## Directions

For UMass Lowell directions, call (978) 934-5800.

For UMass Lowell online directions, go to [www.uml.edu/maps](http://www.uml.edu/maps)

## Parking

New parking stickers are required for all Continuing Studies students. These stickers are available at the University Police Parking Bureau and in Enrollment Services, Southwick Hall 223. Call the Parking Bureau at (978) 934-4211 for hours of operation. Please check Continuing Studies office hours for availability.

This sticker entitles students to park after 5:30 pm in any University parking lot except Cumnonk Hall. Students are encouraged to park in the numerous parking lots on the North and South campus. **Students and faculty should not compromise public safety by blocking access of fire lanes, ambulance and other emergency vehicles.** Students and faculty should not park in handicap spaces unless they display a handicap sticker. Student and faculty cars will be towed and/or ticketed for violations. In addition, the Lowell Police will tow student and faculty cars if cars are parked in "Residential Parking" areas. Remember to bring your car registration and a photo ID when you come in to get a parking sticker.

Please call the Advising Center at (978) 934-2474 for the locations of parking lots available for use by Continuing Studies students who visit the campus during the day.

## Locating Your Classroom

Upon registration, students are issued a confirmation printout, which includes the two-letter building code along with the room number. Refer to the map and building key above to locate where your class will be held. For assistance, call the Advising Center at (978) 934-2474. If your class has not been assigned a classroom when you register, please visit our Website at <http://continuing.uml.edu> and click on "New! View your schedule and classrooms."

## University Escort Service

The University now operates a motorized escort service seven nights a week from 6:00 pm to 1:00 am. Call Ext. 2222 for a ride anywhere on campus — from the parking lots, to the library, the residence hall, or the gym. It is a service designed for the entire University community day and evening students, staff, and faculty.

This newspaper is printed at no cost to the Commonwealth of Massachusetts. The University of Massachusetts Lowell is an Equal Opportunity/Affirmative Action University and does not discriminate in employment or access to programs or services on the basis of race, sex, sexual orientation, color, national origin, religion, handicap, or veteran's status and is in compliance with Title IX of the Education Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973, and the Americans With Disabilities Act, 1990. Any inquiries and/or grievances may be referred to the Affirmative Action Officer, the Title IX Coordinator, the Disabilities Coordinator and/or to the Director, Office for Civil Rights, U.S. Department of Health and Human Services, Washington, D.C.

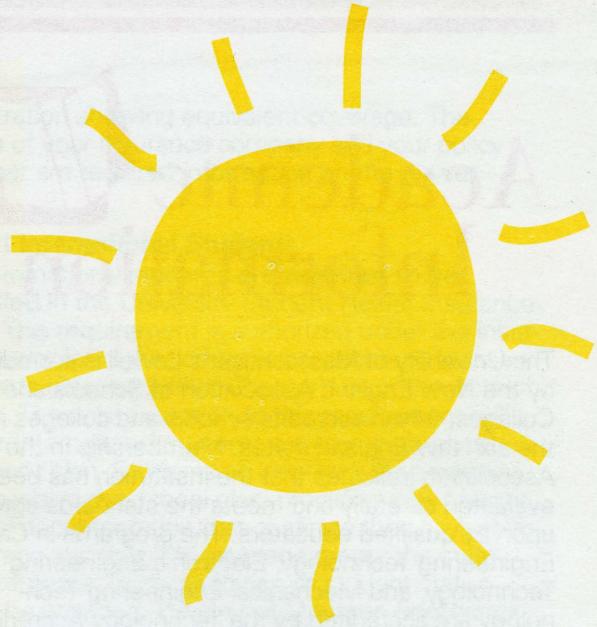
Every effort has been made to ensure the accuracy of the information presented in this bulletin. However, Continuing Studies, Corporate and Distance Education reserves the right to implement new rules and regulations and to make changes of any nature in its program, calendar, procedures and standards, degree requirements, and academic schedules (including, without limitations, changes in course content and class schedules), locations, tuition, and fees. Whenever possible, appropriate notice of such changes will be given before they become effective. When changes are necessary, Continuing Studies exerts reasonable efforts to provide comparable or substantially equivalent instructional services and facilities for those originally designated. However, C.S.C.E. assumes no liability for failure to deliver or for delay in delivering such services (including those in support of academic functions or student life) when the causes for such failure or delay are beyond the reasonable control of Continuing Studies - which causes include, without limitation, the following: power failure, fire, accident, natural disaster, work slowdown and strikes, loss of personnel, and acts of public authorities.

In registering for courses, each student assumes full responsibility for knowledge of and compliance with the definitions, regulations, and procedures for the University as set forth in the appropriate publications and bulletins.

# What's new

# What's hot

# this summer



## New Undergraduate Courses

### Summer Session I

#### HISTORY

43.334-011 The French Revolution and Napoleon  
43.382-011 The American West

#### INFORMATION TECHNOLOGY

90.271-011 C# (C Sharp) Programming  
90.320-031 Shell Scripting Using Linux — Now Online!  
90.483-011 Wireless Communications  
90.484-011 Optical Networking SONET/SDH  
90.486-011 Multiprotocol Label Switching (MPLS)

#### MATHEMATICS

92.488-021 Statistical Quality Control

**See New Non-Credit Seminars in Management on page 11.**

### Summer Session II

#### INFORMATION TECHNOLOGY/MUSIC

78.201-021 Intro. to Audio for Multimedia and the Web - Featuring Sound Forge® 6.0/Windows

#### MATHEMATICS

92.486-021 Statistical Programming Using SAS

#### MUSIC

71.204-021 Aural Skills 4

## New Graduate Courses

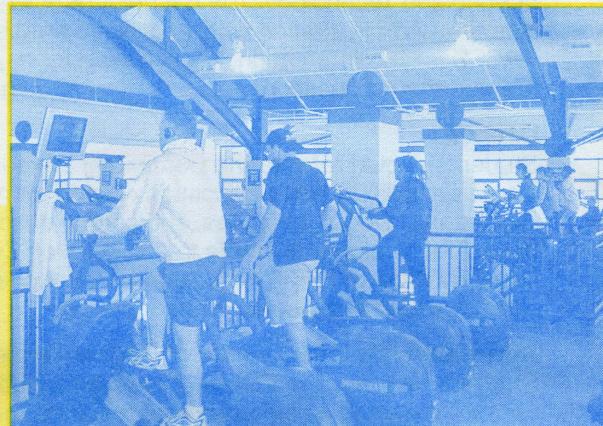
### New Graduate Online Courses Offered May 19-August 15, 2003

32.604-031 Health Data Analysis — Now Online!  
34.702-031 Clinical Reasoning in Physical Therapy — NEW!  
44.526-031 Hate Crimes — Now Online!  
44.543-031 Forensic Psychology — Now Online!  
44.563-031 Substance Abuse and the Criminal Justice System — Now Online!  
44.622-031 Family Violence — Now Online!  
47.536-031 Forensic Psychology — Now Online!  
62.601-031 Analysis of Customers and Markets — Now Online!

## New Graduate Music Education Courses

### Offered in Summer Session II

73.580 Orff Master Class (8/11-8/15)  
73.581 The Opera Connection (7/21-7/22)  
73.582 Making Music Videos: An Engaging Assessment Tool (8/23-8/25)



## Sign Up Now

for Summer Courses at UMass Lowell and Qualify for a Reduced Summer Fitness Membership!

- Just \$75 to use UMass Lowell's New Student Recreation Center this Summer!
- Proof of summer course registration will be required for membership.
- Summer Memberships will run from Monday, May 19 through Saturday, August 30, 2003.

Visit UMass Lowell's Recreation Center Website at [www.uml.edu/campusrecreation](http://www.uml.edu/campusrecreation) or call (978) 934-2348 for more information.

Summer Fitness Membership Cards Will Go on Sale Starting the Week of May 12th!

## REGISTRATION FORM FOR CREDIT/NONCREDIT COURSES

Note: Please remember to fill in your work, home phone numbers and email address. This will allow us to reach you in case of class cancellations.

### University of Massachusetts Lowell

Continuing Studies and Corporate Education (978) 934-2480  
One University Avenue, Lowell, MA 01854

#### PLEASE USE INK AND PRINT

#### CHECK APPROPRIATE REGISTRATION STATUS:

Summer I (May 19–June 27)  Summer II (July 7–August 15)  
 Graduate  Non-Credit

Social Security No. \_\_\_\_\_ Tax ID No. \_\_\_\_\_  
Name \_\_\_\_\_  
Street & No. \_\_\_\_\_  
City & State \_\_\_\_\_ Zip Code \_\_\_\_\_

Date \_\_\_\_\_

Sex  M  F Date of Birth \_\_\_\_\_

Work Phone \_\_\_\_\_

Home Phone \_\_\_\_\_

Email \_\_\_\_\_

Company Name \_\_\_\_\_

Street Address \_\_\_\_\_

City & State \_\_\_\_\_

Change of name or address since last registration?  yes  no

Former name \_\_\_\_\_

Will you be using veteran benefits?  yes  no

State/Active Duty \_\_\_\_\_ G.I. Bill \_\_\_\_\_

COURSES FOR WHICH YOU ARE REGISTERING		
Course Number	Course Title	Credits/Non-Credit
-	-	
-	-	
-	-	
-	-	
-	-	
<b>SUMMER I</b>		
-	-	
-	-	
-	-	
-	-	
<b>SUMMER II</b>		
-	-	
-	-	
-	-	
-	-	
-	-	

#### COMPLETE IF PAYING BY CREDIT CARD

MasterCard  VISA  Discover Account Number \_\_\_\_\_  
Expiration Date \_\_\_\_\_ Customer Signature \_\_\_\_\_

#### Tuition and Fees

##### Tuition

**Late Fee**  
(Save \$50 Late Fee – Register Early)

Total \$ . . .